MDX-66XLP

SERVICE MANUAL

Ver 1.1 2002. 04

US Model
Canadian Model
AEP Model
UK Model

Model Name Using Similar Mechanism	NEW
Mini Disc Mechanism Type	MG-798LP-133
Optical Pick-up Name	KMS-241C/J1N

SPECIFICATIONS

System	Mini disc digital audio system
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Signal-to-noise ratio	95 dB
Outputs	Bus control output (8 PIN) Analog audio output (RCA PIN)
Current drain	300 mA (MD playback) 600 mA (during loading or ejecting a disc)
Dimensions	Approx. 176 × 83.5 × 142 mm (7 × 3 3/8 × 5 18/32 in.) (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.1 kg (2 lb. 7 oz.)
Power requirement	12 V DC car battery (negative ground)
Supplied accessories	Mounting hardware (1 set) Bus cable 5.5 m (1) RCA pin cord 5.5 m (1)

- *U.S. and foreign patents licensed from Dolby Laboratories.*
- *Design and specifications are subject to change without notice.*

FEATURES

- MDLP (MiniDisc Long Play) playback.
- Sony BUS system compatible with mobile MD changers.
- Direct-in system for inserting and removing MDs easily.
- The MD changer compartment has a built in light for easy use even in the dark.
- 1 bit Digital/Analog converter for high quality sound reproduction.

MINIDISC CHANGER

9-873-582-02
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Sony Corporation
e Vehicle Company
Published by Sony Engineering Corporation

SONY®

SERVICE NOTE

US, Canadian model

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

AEP, UK model

This label is located on the bottom of the chassis.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

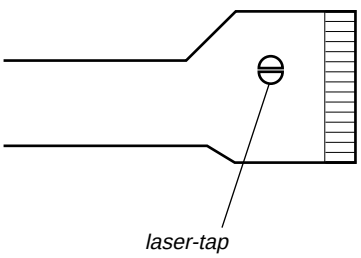
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.
Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241C/J1N)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

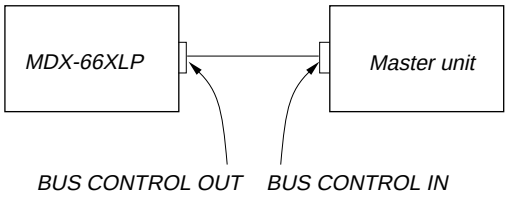
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICE NOTE

1-1. TO PLACE THE SET INTO PLAYBACK MODE

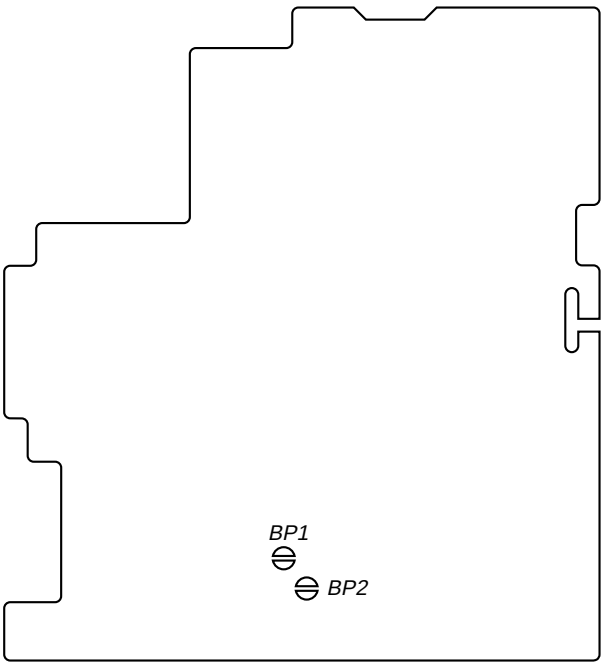
The this set has no key control function and cannot be placed into the Playback mode alone.
For key control, the this set is controlled through serial communication with a master unit (car audio player, TV tuner or source selector compatible with the Sony BUS system.)
To service the this set, the set should be connected as given below:



1-2. HOW TO CHECK THE SERVO BOARD WAVEFORMS

1. Remove the panel (rear) assy, case (upper) and panel (front) assy. Then, remove the main board from the mechanism deck. (See page 8 of “SECTION 3. DISASSEMBLY”.)
2. Remove the chassis (OP) block from the mechanism deck. (See page 9 of “SECTION 3. DISASSEMBLY”.)
3. Short each bridge points BP1 and BP2 on the main board by solder bridge.

– main board (conductor side) –



4. Connect the power board with the main board by the main flexible board. Connect the main board with the servo board by the servo flexible board.
5. Connect to a master unit. With the master unit OFF, press the preset buttons [4] → [5] → [1] (2 seconds or more each) in this turn to enter the TEST mode.
6. Open the doors and insert a disc in the chassis (OP) assy. Use the [SOURCE] button on the master unit to select to MD to playback.
7. Check the waveforms at each point on the servo board.

Note: After this check is completed, remove solder between shorted bridge points BP1 and BP2 and open these points.

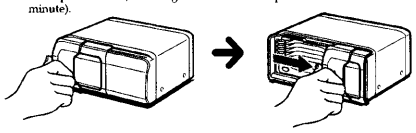
SECTION 2
GENERAL

This section is extracted from instruction manual.

PREPARATIONS (US, Canadian Model)

Preparations

1 **Slide the door open until it clicks.**
The built-in light inside the compartment will be lit. (If the ignition key is in the OFF position, the light automatically goes out after one minute.)
Ouvrez le panneau frontal en le faisant coulisser jusqu'à ce qu'il s'encliquette.
L'éclairage intégré s'allume à l'intérieur du compartiment. (Si la clé de contact est en position OFF, l'éclairage s'éteint automatiquement au bout d'une minute).



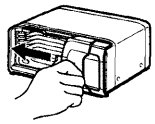
Do not reach into the changer to avoid injury.

Cautionary notice for opening and closing the door
If you press on the transparent window too hard, it may break or cause injury.

N'introduisez pas les doigts à l'intérieur du changeur de manière à éviter tout risque de blessure.

Précaution pour l'ouverture et la fermeture du panneau frontal
Si vous appuyez trop fort sur la fenêtre transparente, vous risquez de la briser ou de vous blesser.

3 **Slide the door closed until it clicks.**
Refermez le panneau frontal en le faisant coulisser jusqu'à ce qu'il s'encliquette.

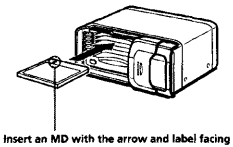


Always use the unit with the door closed.
Otherwise, foreign matter may enter the unit and contaminate the lenses inside the changer.

Note
When an MD is inserted and the door is closed, or the reset button of the connected car audio is pressed, the unit will be automatically activated and read the information on the MDs. After the information on all of the MDs has been read, the unit is ready to play.

Préparation

2 **Insert an MD until it clicks.**
Introduisez un MD jusqu'à ce qu'il s'encliquette.



Insert an MD with the arrow and label facing up.
Introduisez un MD avec la flèche et l'étiquette orientées vers le haut.

Notes
- *Do not insert an MD with the label facing downwards.*
- *Make sure the MD's shutter is closed before inserting it into the magazine.*

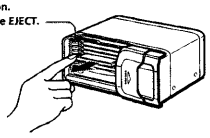
Remarques
- *N'introduisez pas un MD avec l'étiquette vers le bas.*
- *Assurez-vous que le volet du MD est fermé avant de l'introduire dans le magasin.*

Le panneau frontal doit toujours être fermé en cours d'utilisation.
Sinon, des corps étrangers risquent de pénétrer à l'intérieur et de souiller les lentilles du changeur.

Remarque
Lorsqu'un MD est inséré et le volet refermé ou que la touche de réinitialisation de l'autoradio connecté est enfoncée, l'appareil est automatiquement activé et entame la lecture des informations contenues sur les MD. Lorsque les informations de tous les MD ont été lues, l'appareil est prêt pour la lecture.

To remove an MD / Pour retirer un MD

Press the EJECT button.
Appuyez sur la touche EJECT.



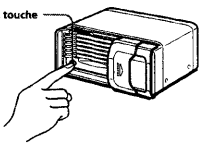
Notes
- *When removing two or more MDs, remove them in order from the upper tray.*
- *Never press the EJECT button for the MD which is in the play position.*

Remarques
- *Si vous retirez deux MD ou plus, commencez par le plateau supérieur.*
- *N'appuyez jamais sur la touche EJECT pour le MD qui se trouve en position de lecture.*

You can remove MDs anytime except while one is playing.
Vous pouvez retirer des MD à tout moment sauf en cours de lecture.

To remove the MD in the play position / Pour retirer le MD en position de lecture

Press the stop button.
Appuyez sur la touche STOP.



The MD goes to the loading position.
Press the EJECT button, and remove the MD.
You can remove an MD in this way while it's playing or in the play position.

Le MD se met en position de chargement.
Appuyez sur la touche EJECT et retirez le MD.
Vous pouvez retirer un MD de cette façon lorsqu'il est en cours de lecture ou dans la position de lecture.

Listening to MDs

Operate the master unit. See the operating instructions of the master unit for details. When you select another disc to play, the volume of the MD that's playing goes down, and the discs change.

Note
The unit does not have the custom file function.

Ecoute d'un MD

Utilisez l'appareil principal. Pour plus de détails, consultez le mode d'emploi de l'appareil principal.
Si vous sélectionnez la reproduction d'un autre disque, le volume du MD en cours de lecture baisse et les disques sont changés.

Remarque
L'appareil ne possède pas la fonction de fichier d'utilisateur.

CONNECTIONS (US, Canadian Model)

Connections

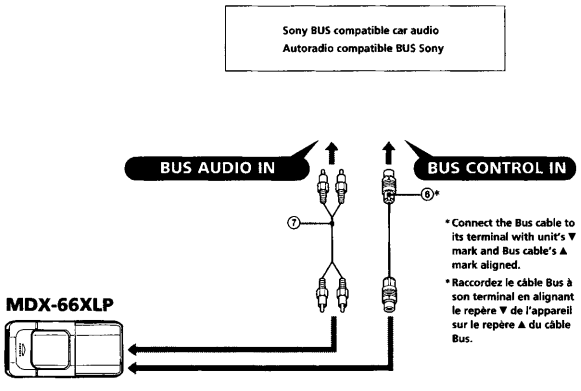
For details, refer to the Installation/Connections manual of each product.

Connexions

Pour plus de détails, consultez le manuel d'installation/connexions de chaque produit.

Connection diagram

Schéma de connexions



*** Connect the Bus cable to its terminal with unit's ▼ mark and Bus cable's ▲ mark aligned.**
*** Raccordez le câble Bus à son terminal en alignant le repère ▼ de l'appareil sur le repère ▲ du câble Bus.**

Notes
- *Be sure to insert each connector securely, as vibration through driving may cause a poor connection.*
- *Insert the Bus cable until you hear a click.*
- *When removing the cable, hold the connector. If you pull out by the cable, the cable may become loose.*
- *For connecting two or more changers, the source selector XA-30 (optional) is necessary.*

Remarques
- *Assurez-vous d'insérer correctement chaque connecteur, les vibrations lors de la conduite pouvant entraîner un mauvais contact.*
- *Insérez le câble Bus jusqu'à ce qu'il s'encliquette.*
- *Lorsque vous retirez le câble, maintenez le connecteur. Si vous tirez sur le câble, ce dernier peut lâcher.*
- *Pour connecter deux ou plusieurs changeurs, le sélecteur de source XA-30 (en option) est requis.*

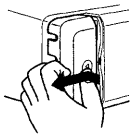
How to detach and attach the protection cover

Before connecting the cords, detach the protection cover.

Comment déposer et installer le couvercle de protection

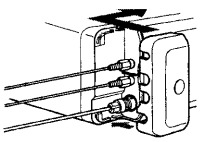
Avant de brancher les câbles, retirez le couvercle de protection.

To detach
Pour enlever



Push in and slide the protection cover off.
Enfoncez et retirez le couvercle de protection en le faisant glisser.

To attach
Pour installer



PREPARATIONS (AEP, UK Model)

Preparations

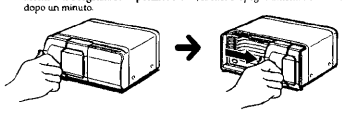
1 **Slide the door open until it clicks.**
The built-in light inside the compartment will be lit. (If the ignition key is in the OFF position, the light automatically goes out after one minute.)

Ouvrez le panneau frontal en le faisant coulisser jusqu'à ce qu'il s'encliquette.
L'éclairage intégré s'allume à l'intérieur du compartiment. (Si la clé de contact est en position OFF, l'éclairage s'éteint automatiquement au bout d'une minute).

Öffnen Sie die Klappe, indem Sie sie zur Seite schieben, bis sie einrastet.
Die im Fach eingebaute Leuchte schaltet sich ein. Wenn sich der Zündschlüssel in der Position AUS befindet, erlischt die Leuchte nach einer Minute automatisch.

Schuif het luikje open tot u een klik hoort.
De ingebouwde verlichting brandt. (Met de contactsleutel in de stand OFF doft de verlichting automatisch na een minuut.)

Aprire lo sportello facendolo scorrere fino a udire uno scatto.
La luce incorporata all'interno dello scomparto si accende. Se la chiave di accensione è regolata sulla posizione OFF, la luce si spegne automaticamente dopo un minuto.



Do not reach into the changer to avoid injury.

Cautionary notice for opening and closing the door
If you press on the transparent window too hard, it may break or cause injury.

N'introduisez pas les doigts dans le changeur afin d'éviter tout risque de blessures.

Précaution pour l'ouverture et la fermeture du panneau frontal
Si vous appuyez trop fort sur la fenêtre transparente, vous risquez de la briser ou de vous blesser.

Greifen Sie nicht in den Wechsler. Andernfalls besteht Verletzungsgefahr.

Warnhinweis zum Öffnen und Schließen der Klappe
Wenn Sie zu stark auf das durchsichtige Fenster drücken, kann es zerbrechen und Verletzungen verursachen.

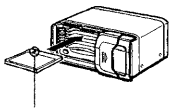
Kom niet aan de binnenkant van de wisselaar, want zo kan u zich verwonden.

Let op bij het openen en sluiten van het luikje
Wanneer u te hard op het raampje drukt, kan dit breken en verwondingen veroorzaken.

Non introdurre le dita all'interno del cambia MD onde evitare di ferirsi.

Avvertenze per l'apertura e chiusura dello sportello
Se si preme troppo forte sulla finestra trasparente, questa potrebbe rompersi o causare danni.

2 **Insert an MD until it clicks.**
Introduisez un MD jusqu'à ce qu'il s'encliquette.
Legen Sie eine MD ein. Achten Sie darauf, daß sie einrastet.
Breng een MD in tot u een klik hoort.
Inserire un minidisco fino a udire uno scatto.



Insert an MD with the arrow and label facing up.
Introduisez un MD avec la flèche et l'étiquette orientées vers le haut.
Legen Sie eine MD mit dem Pfeil und der Beschriftung nach oben ein.
Breng een MD in met het pijltje en het label naar boven gericht.
Inserire un minidisco con la freccia e l'etichetta rivolte verso l'alto.

Notes
- *Do not insert an MD with the label facing downwards.*
- *Make sure the MD's shutter is closed before inserting it into the magazine.*

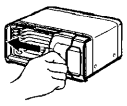
Remarques
- *N'introduisez pas un MD avec l'étiquette vers le bas.*
- *Assurez-vous que le volet du MD est fermé avant de l'introduire dans le magasin.*

Hinweise
- *Legen Sie eine MD nicht mit der Beschriftung nach unten ein.*
- *Achten Sie darauf, daß der Verschluß der MD geschlossen ist, bevor Sie sie in das Magazin einlegen.*

Opmerkingen
- *Breng de MD niet in met het label naar onderen gericht.*
- *Controleer of de sluiter van de MD gesloten is voordat u de MD in de lader brengt.*

Note
- *Non inserire minidischi con l'etichetta rivolta verso il basso.*
- *Accertarsi che l'otturatore del minidisco sia chiuso prima di collocarlo nel contenitore.*

3 **Slide the door closed until it clicks.**
Refermez le panneau frontal en le faisant coulisser jusqu'à ce qu'il s'encliquette.
Schließen Sie die Klappe, indem Sie sie wieder zurückschieben, bis sie einrastet.
Schuif het luikje dicht tot u een klik hoort.
Chiudere lo sportello facendolo scorrere fino a udire uno scatto.



Always use the unit with the door closed.
Otherwise, foreign matter may enter the unit and contaminate the lenses inside the changer.

Note
When an MD is inserted and the door is closed, or the reset button of the connected car audio is pressed, the unit will be automatically activated and read the information on the MDs. After the information on all of the MDs has been read, the unit is ready to play.

Le panneau frontal doit toujours être fermé en cours d'utilisation.
Sinon, des corps étrangers risquent de pénétrer à l'intérieur et de souiller les lentilles du changeur.

Remarque
Lorsqu'un MD est inséré et le volet refermé ou que la touche de réinitialisation de l'autoradio connecté est enfoncée, l'appareil est automatiquement activé et entame la lecture des informations contenues sur les MD. Lorsque les informations de tous les MD ont été lues, l'appareil est prêt pour la lecture.

Verwenden Sie das Gerät immer nur mit geschlossener Klappe.
Andernfalls können Fremdkörper in das Gerät gelangen und die Linsen im Inneren des Wechslers verschmutzen.

Hinweis
Wenn eine MD eingelegt und die Klappe geschlossen oder die Rücksetztaste an der angeschlossenen Autoanlage gedrückt wird, wird das Gerät automatisch eingeschaltet, und die Informationen auf den MDs werden eingelesen. Wenn die Informationen aller MDs eingelesen wurden, ist das Gerät bereit für die Wiedergabe.

Gebruik het toestel altijd met het luikje dicht.
Anders kunnen vreemde lichamen in het toestel terechtkomen en kunnen de lenzen in de wisselaar vervuild geraken.

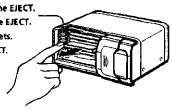
Opmerking
Wanneer een MD wordt ingebracht of wanneer de terugstelltoets van het aangesloten autosysteem wordt ingedrukt, schakelt het toestel automatisch in en wordt de informatie op de MD's gelezen. Nadat de informatie op alle MD's is gelezen, is het toestel klaar om te beginnen afspelen.

Utilizzare sempre l'apparecchio con lo sportello chiuso.
Corpi estranei potrebbero penetrare nell'apparecchio e sporcare le lenti interne del cambia MD.

Nota
Quando viene inserito un minidisco e lo sportello è chiuso o viene premuto il pulsante di azzeramento dell'autoradio collegata, l'apparecchio si attiva automaticamente e legge i dati dai minidischi. Al termine della lettura di tutti i dati dei minidischi, l'apparecchio è pronto per la riproduzione.

To remove an MD / Pour retirer un MD / Entnehmen einer MD / Een MD uithalen / Estrazione di un minidisco

Press the EJECT button.
Appuyez sur la touche EJECT.
Drücken Sie die Taste EJECT.
Druk op de EJECT-toets.
Premere il tasto EJECT.



You can remove MDs anytime except while one is playing.
Vous pouvez retirer des MD à tout moment sauf en cours de lecture.
Sie können MDs außer während der Wiedergabe einer MD jederzeit entnehmen.
U kan op elk ogenblik MD's uithalen, behalve wanneer er een MD aan het afspelen is.
I minidischi possono essere estratti in qualsiasi momento tranne durante la riproduzione.

Notes
- *When removing two or more MDs, remove them in order from the upper tray.*
- *Never press the EJECT button for the MD which is in the play position.*

Remarques
- *Si vous retirez deux MD ou plus, commencez par le plateau supérieur.*
- *N'appuyez jamais sur la touche EJECT pour le MD qui se trouve en position de lecture.*

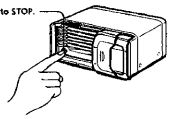
Hinweise
- *Wenn Sie zwei oder mehr MDs entnehmen, nehmen Sie zunächst die in den weiter oben liegenden Fächern heraus.*
- *Drücken Sie die Taste EJECT nicht für die MD, die sich an der Wiedergabeposition befindet.*

Opmerkingen
- *Wanneer u twee of meer MD's wilt uithalen, neem ze dan achtereenvolgens van boven naar onder uit.*
- *Druk niet op de EJECT-toets in de afspeelstand.*

Note
- *Quando si estraggono due o più minidischi, procedere all'estrazione a partire dal contenitore più in alto.*
- *Non premere il tasto EJECT quando l'MD è in posizione di riproduzione.*

To remove the MD in the play position / Pour retirer le MD en position de lecture / Entnehmen einer MD an der Wiedergabeposition / De MD verwijderen in de weergavestand / Estrazione di un minidisco pronte per la riproduzione

Press the stop button.
Appuyez sur la touche STOP.
Drücken Sie die Taste STOP.
Druk op de STOP-toets.
Premere il tasto STOP.



The MD goes to the loading position.
Press the EJECT button, and remove the MD.
You can also remove an MD in this way while it's playing.

Le MD passe en position de chargement.
Appuyez sur la touche EJECT et retirez le MD.
Vous pouvez également retirer un MD de cette façon lorsqu'il est en cours de lecture.

Die MD wird an die Einlegeposition.
Drücken Sie die Taste EJECT, und nehmen Sie die MD heraus.
Auf diese Art können Sie eine MD herausnehmen, die gerade abgespielt wird bzw. die sich an der Wiedergabeposition befindet.

De MD gaat naar de laadpositie
Druk op de EJECT-toets en verwijder de MD.
Zo kan u een MD verwijderen terwijl hij aan het afspelen is.

Il minidisco passa alla posizione di caricamento.
Premere il tasto EJECT ed estrarre il minidisco.
Seguire questa procedura per estrarre un minidisco pronto per la riproduzione o in fase di riproduzione.

Listening to MDs

Operate the master unit. See the operating instructions of the master unit for details.
When you select another disc to play, the volume of the MD that's playing goes down, and the discs change.

Note
The unit does not have the custom file function.

Ecoute d'un MD

Utilisez l'appareil principal. Pour plus de détails, consultez le mode d'emploi de l'appareil principal.
Si vous sélectionnez la reproduction d'un autre disque, le volume du MD en cours de lecture baisse et les disques sont changés.

Remarque
L'appareil ne possède pas la fonction de fichier d'utilisateur.

Wiedergeben von MDs

Starten Sie die Wiedergabe am Hauptgerät.
Einzelheiten dazu finden Sie in der Bedienungsanleitung zum Hauptgerät.
Wenn Sie eine andere MD für die Wiedergabe auswählen, wird die Lautstärke bei der Wiedergabe der aktuellen MD heruntergedreht, und die MD wird gewechselt.

Hinweis
Das Gerät verfügt nicht über die Custom File-Funktion.

MD's beluisteren

Schakel het hoofdtoestel in. Voor meer informatie verwijzen wij u naar de handleiding van het hoofdtoestel.
Wanneer u een andere disc selecteert, vermindert het volume van de MD die aan het afspelen is en worden de discs verwisseld.

Opmerking
Het toestel is niet uitgerust met de custom file-functie.

Ascolto di minidischi

Attivare l'apparecchio centrale.
Per maggiori dettagli, leggere le istruzioni d'uso relative all'apparecchio centrale.
Quando si seleziona un altro disco da riprodurre, il volume del minidisco in fase di riproduzione si attenua e avviene lo scambio di dischi.

Nota
L'apparecchio non è dotato della funzione di personalizzazione dei file.

CONNECTIONS (AEP, UK Model)

Connections

For details, refer to the Installation/Connections manual of each product.

Connexions

Pour plus de détails, consulter le manuel d'installation/connexions de chaque produit.

Anschluß

Einzelheiten entnehmen Sie der Installations/Anschluß-Anleitung des betreffenden Geräts.

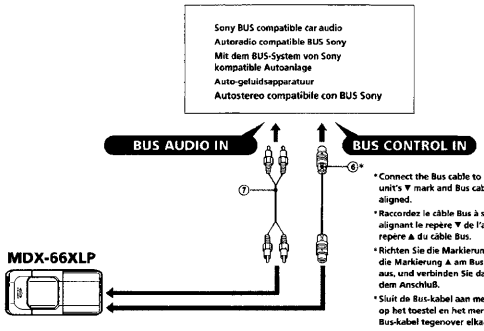
Aansluitingen

Zie voor nadere bijzonderheden de gebruiksaanwijzing voor installatie en aansluitingen van de aan te sluiten apparatuur.

Collegamenti

Per i dettagli, fare riferimento al manuale di installazione/collegamenti di ciascun prodotto.

Connection diagram / Schéma de connexions / Anschlußdiagramm / Aansluitingsschema / Schema di collegamento



- **Connect the Bus cable to its terminal with unit's ▼ mark and Bus cable's ▲ mark aligned.**
- **Raccordez le câble Bus à son terminal en alignant le repère ▼ de l'appareil sur le repère ▲ du câble Bus.**
- **Richten Sie die Markierung ▼ am Gerät und die Markierung ▲ am Buskabel aneinander aus, und verbinden Sie das Bus-Kabel mit dem Anschluß.**
- **Sluit de Bus-kabel aan met het merkteken ▼ op het toestel en het merkteken ▲ op de Bus-kabel tegenover elkaar.**
- **Collegare il cavo Bus al relativo terminale allineando il simbolo ▼ dell'apparecchio con il simbolo ▲ del cavo Bus.**

Notes
- *Be sure to insert each connector securely, as vibration through driving may cause a poor connection.*
- *Insert the Bus cable until you hear a click.*
- *When removing the cable, hold the connector. If you pull out by the cable, the cable may become loose.*
- *For connecting two or more changers, the source selector XA-30 (optional) is necessary.*

Remarques
- *Assurez-vous d'insérer correctement chaque connecteur, les vibrations lors de la conduite pouvant entraîner un mauvais contact.*
- *Insérez le câble Bus jusqu'à ce qu'il s'encliquette.*
- *Lorsque vous retirez le câble, maintenez le connecteur. Si vous tirez sur le câble, ce dernier peut lâcher.*
- *Pour connecter deux ou plusieurs changeurs, le sélecteur de source XA-30 (en option) est requis.*

Hinweise
- *Achten Sie auf sicheren Sitz der Steckverbindungen, da sich diese durch die Vibrationen beim Fahren sonst lösen könnten.*
- *Stecken Sie das Bus-Kabel hinein, bis es mit einem Klicken einrastet.*
- *Ziehen Sie beim Abnehmen des Kabels immer am Stecker. Wenn Sie am Kabel selbst ziehen, kann sich das Kabel vom Stecker lösen.*
- *Zum Anschließen von zwei oder mehr Wechslern wird der gesondert erhältliche Signalquellenwähler XA-30 benötigt.*

Opmerkingen
- *Sluit alle stekker stevig aan om te voorkomen dat hij tijdens het rijden losrilt.*
- *Breng de Bus-kabel in tot u een klik hoort.*
- *Houd de stekker vast om de kabel los te koppelen. Wanneer u aan de kabel trekt, kan die loskomen.*
- *Om twee of meer wisselaars aan te sluiten, is de bronkiezer XA-30 (los verkrijgbaar) vereist.*

Note
- *Accertarsi di inserire saldamente tutti i connettori in quanto le vibrazioni dell'auto in movimento potrebbero influire negativamente sul collegamento.*
- *Inserire il cavo Bus finché non scatta in posizione.*
- *Per rimuovere il cavo, afferrarlo dal connettore. Diversamente, il cavo potrebbe allentarsi.*
- *Per il collegamento di due o più cambia MD è necessario disporre del selettore di sorgente XA-30 (opzionale).*

How to detach and attach the protection cover

Before connecting the cords, detach the protection cover.

Pose et dépose du couvercle de protection

Avant de brancher les câbles, déposez le couvercle de protection.

Abnehmen und Anbringen der Schutzabdeckung

Bevor Sie die Kabel anschließen, nehmen Sie die Schutzabdeckung ab.

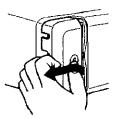
Verwijderen en bevestigen van het beschermdeksel

Voordat u de kabels gaat aansluiten, moet u het beschermdeksel verwijderen.

Rimozione e applicazione del coperchio di protezione

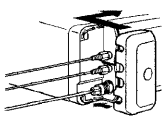
Prima di collegare i cavi, rimuovere il coperchio di protezione.

To detach
Dépose
Abnehmen
Verwijderen
Rimozione



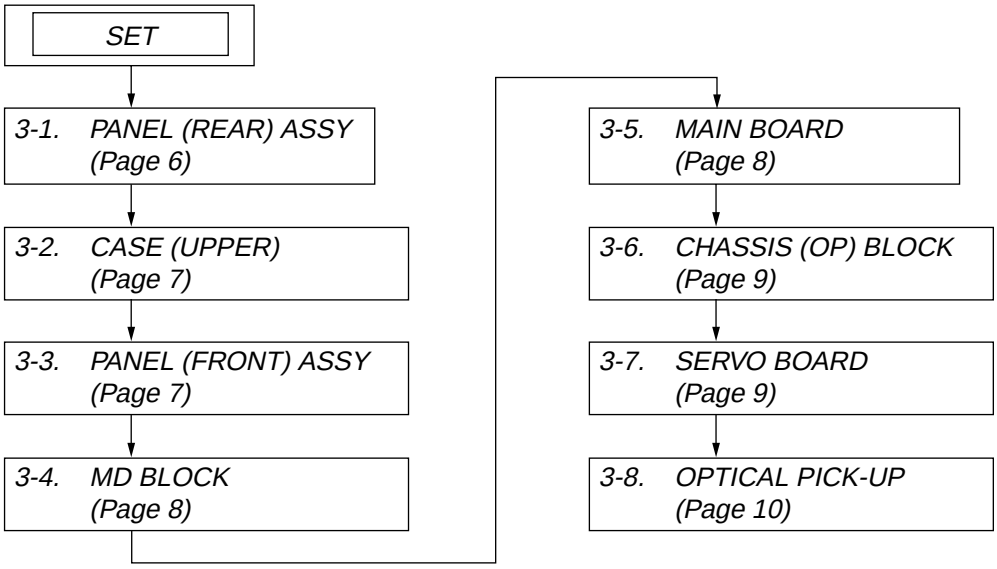
Push in and slide the protection cover off.
Enfoncez et dégagez le couvercle de protection.
Drücken Sie an dieser Stelle, und ziehen Sie die Schutzabdeckung ab.
Het beschermdeksel indrukken en wegschuiven.
Premere e far scorrere il coperchio di protezione sino ad estrarlo.

To attach
Pose
Anbringen
Bevestigen
Applicazione



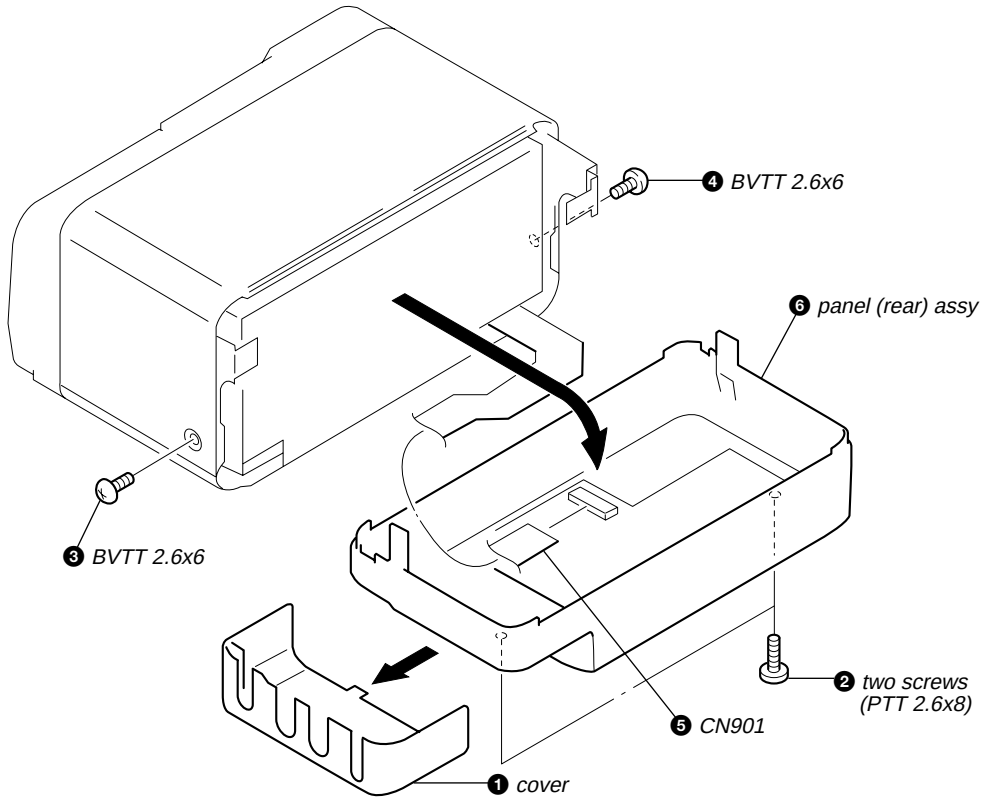
SECTION 3
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

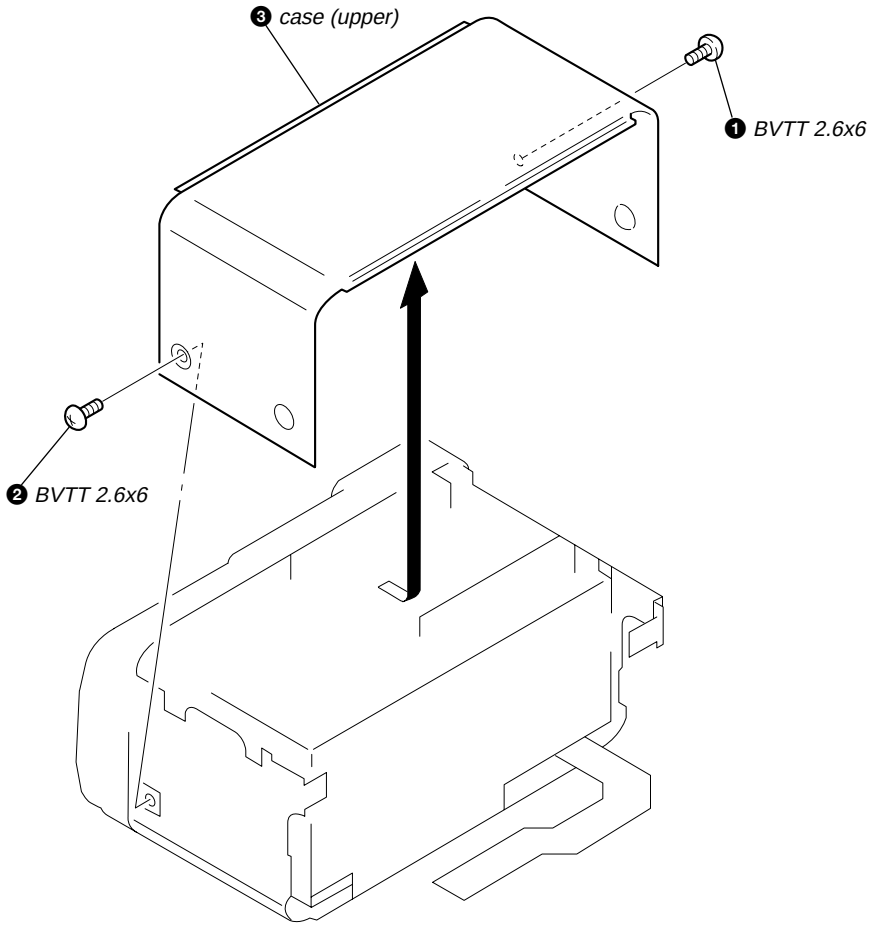

SET
3-1. PANEL (REAR) ASSY (Page 6)
3-2. CASE (UPPER) (Page 7)
3-3. PANEL (FRONT) ASSY (Page 7)
3-4. MD BLOCK (Page 8)
3-5. MAIN BOARD (Page 8)
3-6. CHASSIS (OP) BLOCK (Page 9)
3-7. SERVO BOARD (Page 9)
3-8. OPTICAL PICK-UP (Page 10)

Note : Follow the disassembly procedure in the numerical order given.

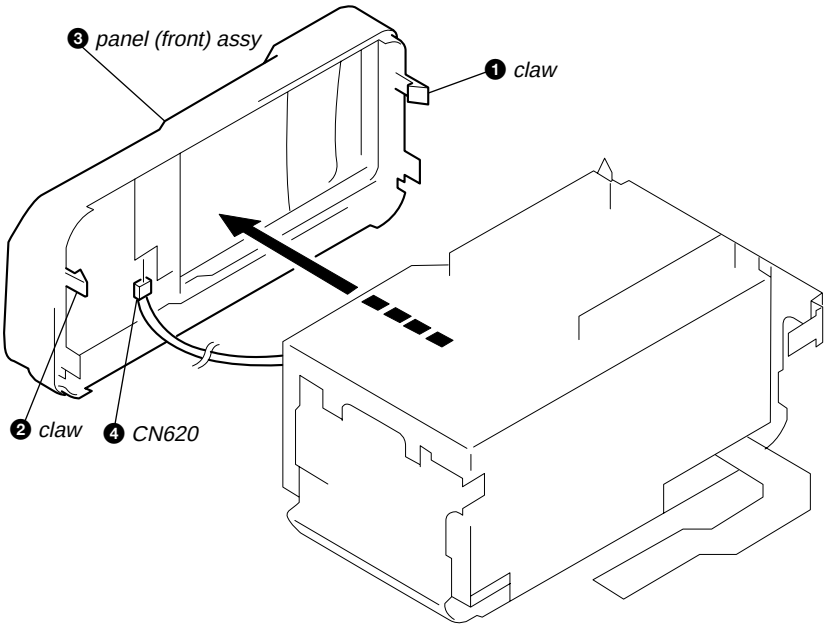
3-1. PANEL (REAR) ASSY



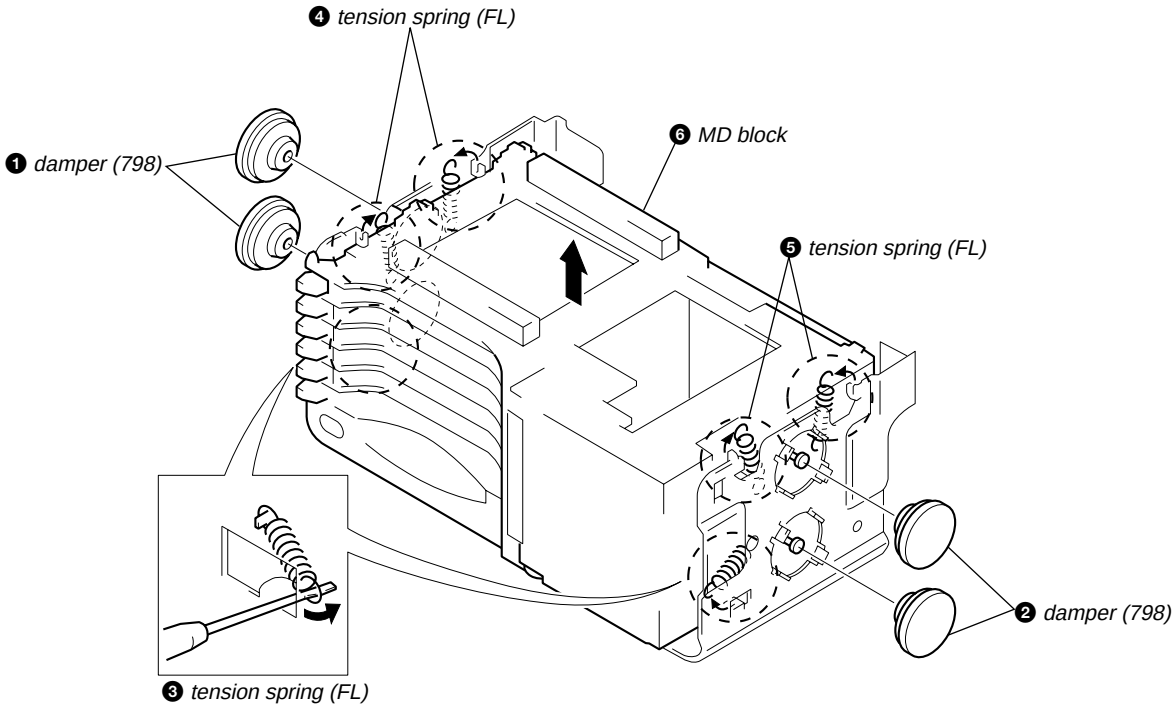
3-2. CASE (UPPER)



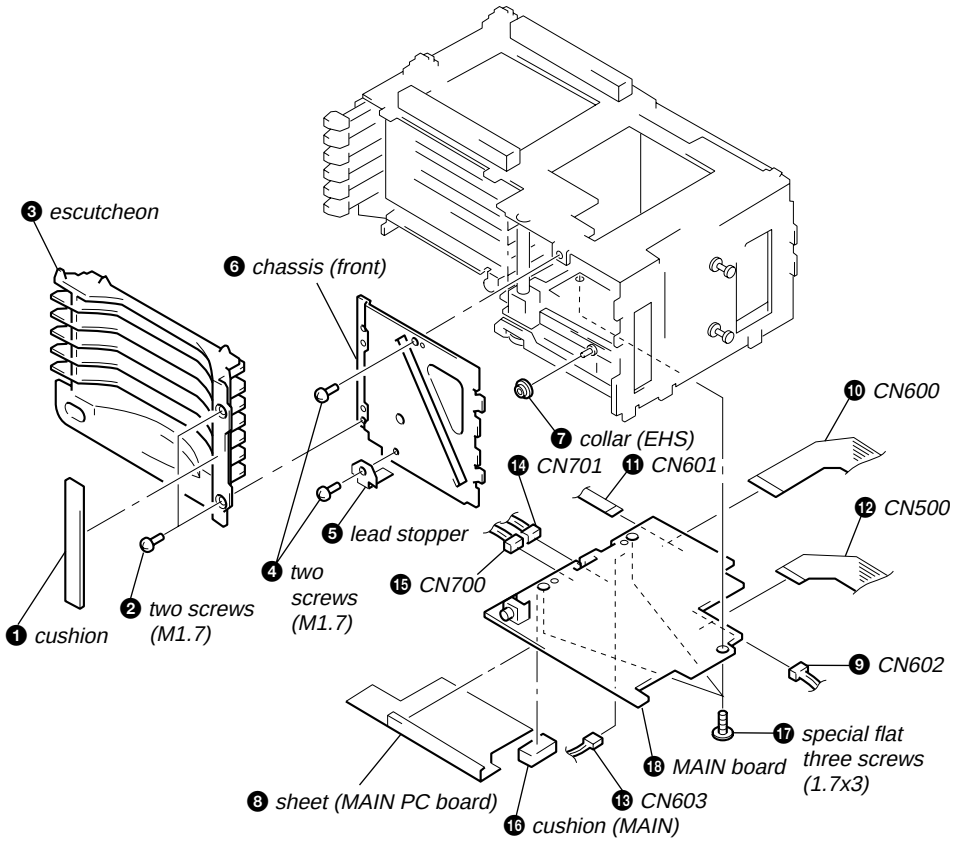
3-3. PANEL (FRONT) ASSY



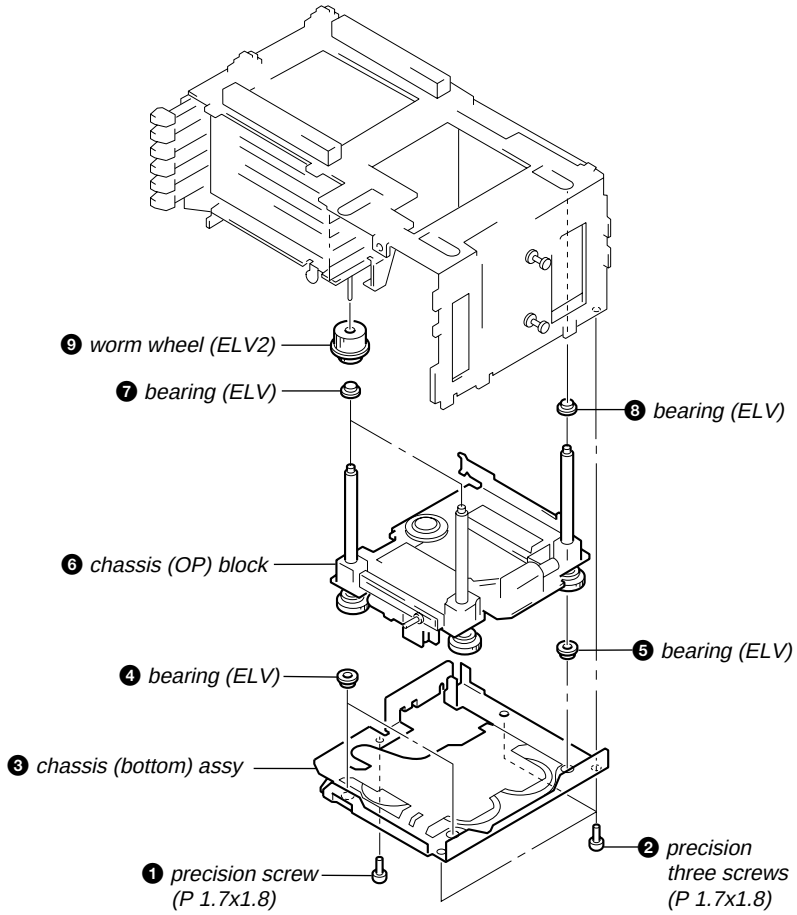
3-4. MD BLOCK



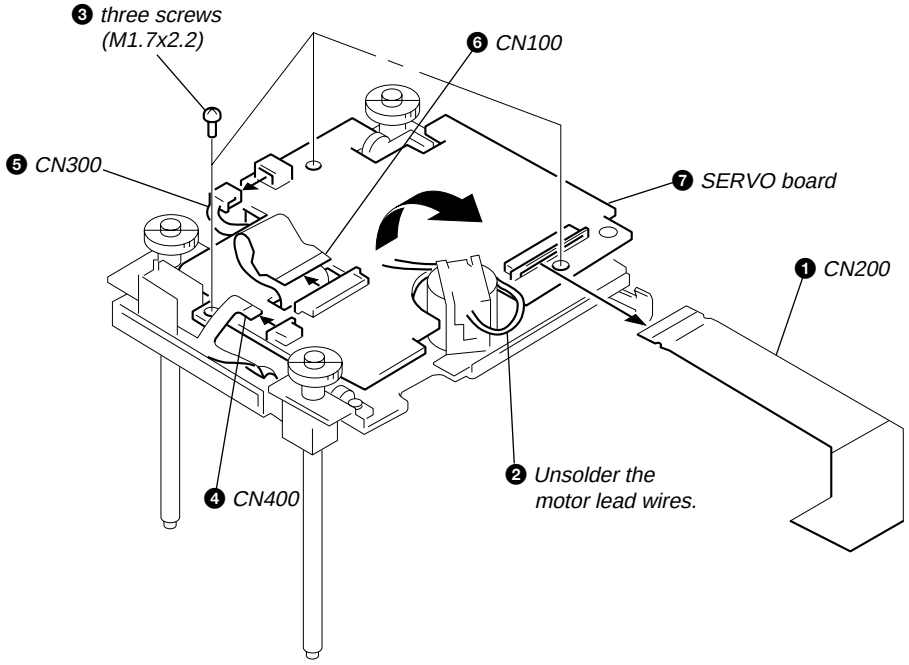
3-5. MAIN BOARD



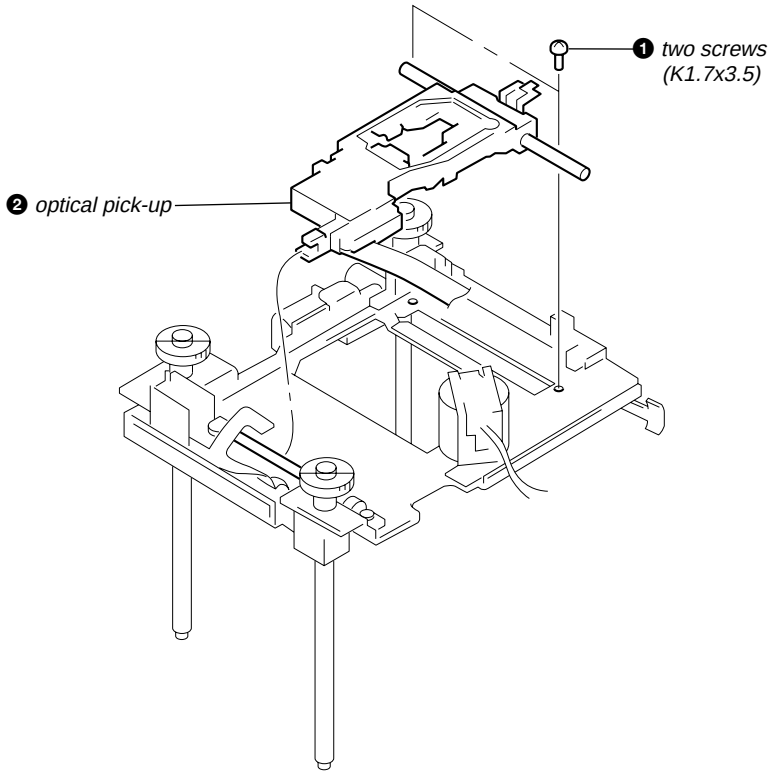
3-6. CHASSIS (OP) BLOCK



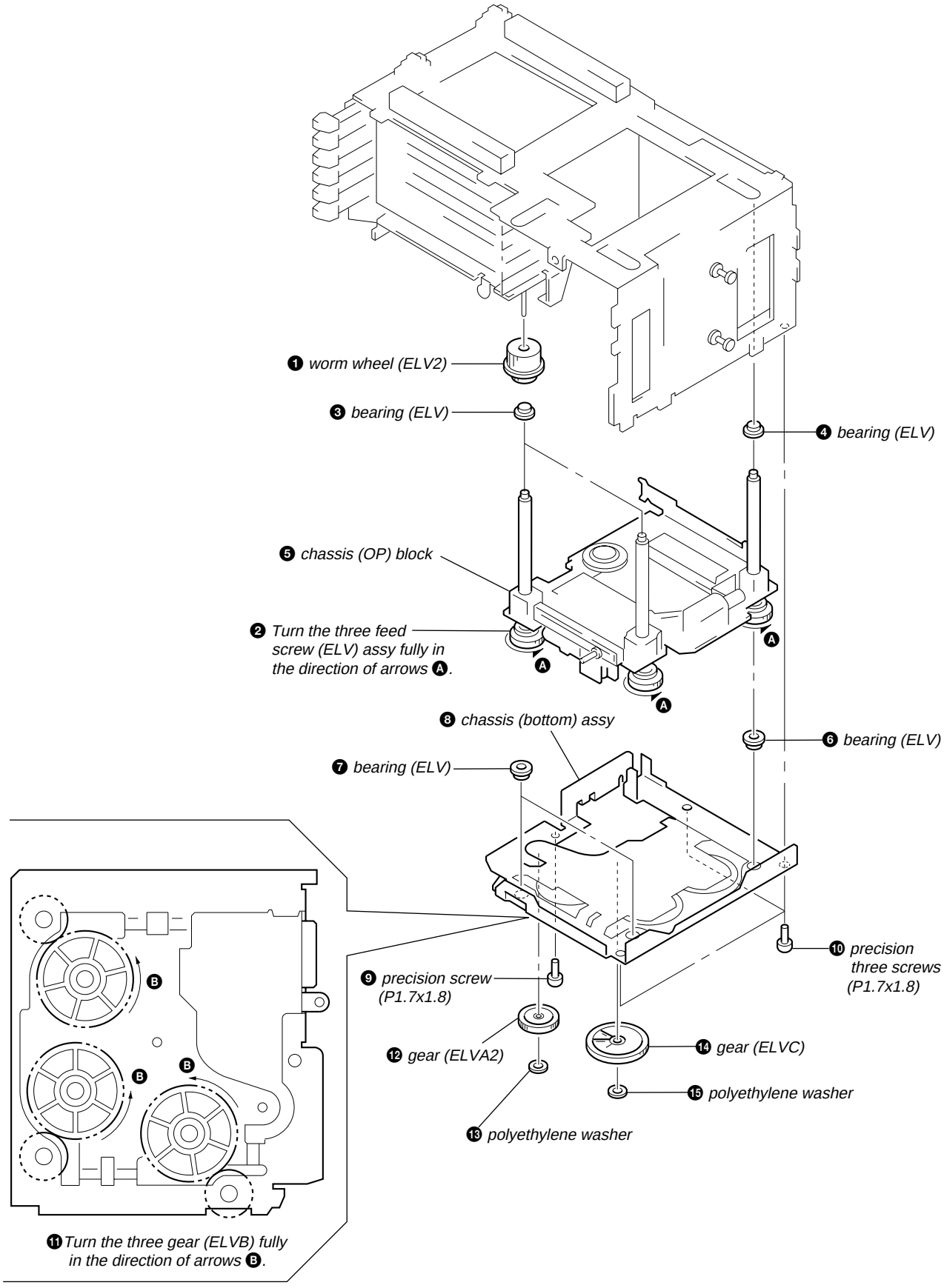
3-7. SERVO BOARD



3-8. OPTICAL PICK-UP



3-9. NOTE ON ASSEMBLY FOR THE CHASSIS (OP) BLOCK



SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTIONS

• IC100 CXA2523AR (RF AMP)

Pin No.	Pin Name	I/O	Pin Description
1	I	I	I-V converted RF signal input (I) from detector of optical pick-up
2	J	I	I-V converted RF signal input (J) from detector of optical pick-up
3	VC	O	Center voltage (+1.65 V) generation output
4 – 9	A – F	I	Signal input (A to F) from detector of optical pick-up
10	PD	I	Quantity monitor input of light from laser diode of optical pick-up
11	APC	O	Laser amplifier output to automatic power control circuit
12	APCREF	I	Reference voltage input for laser power setting
13	GND	—	Ground pin
14	TEMPI	I	Temperature sensor connecting pin (Not used in this set.)
15	TEMPR	O	Reference voltage output for temperature sensor (Not used in this set.)
16	SWDT	I	Write data signal input from System controller (IC600)
17	SCLK	I	Serial clock signal input from System controller (IC600)
18	XLAT	I	Serial latch signal input from System controller (IC600)
19	XSTBY	I	Standby signal input (“L” : Standby) (Fixed at “H” in this set.)
20	FOCNT	I	Center frequency control voltage input of internal circuit filter (BPF22, BPF3T and EQ)
21	VREF	O	Reference voltage output (Not used in this set.)
22	EQADJ	I	Center frequency setting input of internal circuit filter (EQ)
23	3TADJ	I	Center frequency setting input of internal circuit filter (BPF3T)
24	VCC	—	Power supply pin (+3.3 V)
25	WBLADJ	I	Center frequency setting input of internal circuit filter (BPF22)
26	TE	O	Tracking error signal output to CXD2662R (IC200)
27	CSLED	I	Connecting pin for low pass filter condenser of sled error signal
28	SE	O	Sled error signal output to CXD2662R (IC200)
29	ADFM	O	FM signal output of ADIP
30	ADIN	I	FM signal input of ADIP by AC combination
31	ADAGC	I	External condenser connecting pin for AGC of ADIP
32	ADFG	O	ADIP double FM signal output (22.05 kHz ± 1 kHz) to CXD2662R (IC200)
33	AUX	O	Support signal (I3 signal/temperature signal) output (Not used in this set.)
34	FE	O	Focus error signal output to CXD2662R (IC200)
35	ABCD	O	Quantity signal output of light to CXD2662R (IC200)
36	BOTM	O	Bottom hold signal output of quantity signal (RF/ABCD) of light to CXD2662R (IC200)
37	PEAK	O	Peak hold signal output of quantity signal (RF/ABCD) of light to CXD2662R (IC200)
38	RF	O	Playback EFM RF signal output to CXD2662R (IC200)
39	RFAGC	I	External condenser connecting pin of AGC circuit for RF
40	AGCI	I	RF signal input by AC combination
41	COMPO	O	User comparator output pin (Not used in this set.)
42	COMPP	I	User comparator input pin (Fixed at “L” in this set.)
43	ADDC	I	External condenser connecting pin for low frequency interception of ADIP amplifier
44	OPO	O	External condenser connect pin for lower cut of ADIP amplifier
45	OPN	I	User operational amplifier inversion input pin (Fixed at “L” in this set.)
46	RFO	O	RF signal output
47	MORFI	I	RF signal input of MO by AC combination
48	MORFO	O	RF signal output of MO

• SERVO BOARD IC200 CXD2662R (DIGITAL SERVO SIGNAL PROCESSOR, DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Pin Description
1	MNT0 (FOK)	O	Focus OK signal output to the MD mechanism controller (IC600) "H" is output when focus is on ("L": NG)
2	MNT1 (SHOCK)	O	Track jump detection signal output to the MD mechanism controller (IC600)
3	MNT2 (XBUSY)	O	Busy monitor signal output to the MD mechanism controller (IC600)
4	MNT3 (SLOCK)	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC600)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC600)
6	SCLK	I (S)	Serial data transfer clock signal input from the MD mechanism controller (IC600)
7	XLAT	I (S)	Serial data latch pulse signal input from the MD mechanism controller (IC600)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC600)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC600)
10	$\overline{\text{XRST}}$	I (S)	Reset signal input from the MD mechanism controller (IC600) "L": reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC600) "L" is output every 13.3 msec Almost all, "H" is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output "L" is output every 13.3 msec Almost all, "H" is output Not used (open).
13	RECP	I	Laser power selection signal input "L": playback mode, "H": recording mode Not used (fixed at "L".).
14	XINT	O	Interrupt status output to the MD mechanism controller (IC600)
15	TX	I	Recording data output enable signal input Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at "L".).
16	OSCI	I	System clock signal (512 Fs = 22.5792 MHz) input terminal
17	OSCO	O	System clock signal (512 Fs = 22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "L" in this set.)
19	DIN0	I	Digital audio signal input terminal when recording mode (for digital optical input) Not used.
20	DIN1	I	Digital audio signal input terminal when recording mode (for digital optical input) Not used.
21	DOUT	O	Digital audio signal output terminal when playback mode (for digital optical output)
22	DATAI	I	Serial data input terminal Not used (fixed at "L".).
23	LRCKI	I	L/R sampling clock signal (44.1 kHz) input terminal Not used (fixed at "L".).
24	XBCKI	I	Bit clock signal (2.8224 MHz) input terminal Not used (fixed at "L".).
25	ADDT	I	Recording data input Not used (fixed at "L".).
26	DADT	O	Playback data output to the A/D, D/A converter (IC500)
27	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the A/D, D/A converter (IC500)
28	XBCK	O	Bit clock signal (2.8224 MHz) output to the A/D, D/A converter (IC500)
29	FS256	O	Clock signal (11.2896 MHz) output to the A/D, D/A converter (IC500)
30	DVDD	—	Power supply terminal (+3.3 V) (digital system)
31 – 34	A03 – A00	O	Address signal output to the D-RAM (IC201)
35	A10	O	Address signal output to the external D-RAM Not used (open).
36 – 40	A04 – A08	O	Address signal output to the D-RAM (IC201)
41	A11	O	Address signal output Not used (open).
42	DVSS	—	Ground terminal (digital system)
43	XOE	O	Output enable signal output to the D-RAM (IC201) "L" active
44	XCAS	O	Column address strobe signal output to the D-RAM (IC201) "L" active
45	A09	O	Address signal output to the D-RAM (IC201)

Pin No.	Pin Name	I/O	Pin Description
46	XRAS	O	Row address strobe signal output to the D-RAM (IC201) "L" active
47	XWE	O	Write enable signal output to the D-RAM (IC201) "L" active
48	D1	I/O	Two-way data bus with the D-RAM (IC201)
49	D0	I/O	
50	D2	I/O	
51	D3	I/O	
52	MDDT1	I (S)	Digital in PLL oscillation input from the external VCO Not used (fixed at "L".).
53	ASYO	O	Playback EFM full-swing output terminal
54	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
55	AVDD	—	Power supply terminal (+3.3 V) (analog system)
56	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
57	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC100)
58	AVSS	—	Ground terminal (analog system)
59	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
60	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
61	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
62	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
63	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC100)
64	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC100)
65	ABCD	I (A)	Light amount signal (ABCD) input form the CXA2523AR (IC100)
66	FE	I (A)	Focus error signal input from the CXA2523AR (IC100)
67	AUX1	I (A)	Auxiliary signal (I_3 signal/temperature signal) input from the CXA2523AR (IC100)
68	VC	I (A)	Middle point voltage (+1.65 V) input from the CXA2523AR (IC100)
69	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open).
70	AVDD	—	Power supply terminal (+3.3 V) (analog system)
71	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at "H" in this set)
72	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at "L" in this set)
73	AVSS	—	Ground terminal (analog system)
74	SE	I (A)	Sled error signal input from the CXA2523AR (IC100)
75	TE	I (A)	Tracking error signal input from the CXA2523AR (IC100)
76	DCHG	I (A)	Connected to the +3.3 V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at "H".).
78	ADFG	I (S)	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523AR (IC100)
79	F0CNT	O	Filter f0 control signal output Not used (open).
80	XLRF	O	Serial data latch pulse signal output Not used (open).
81	CKRF	O	Serial data transfer clock signal output Not used (open).
82	DTRF	O	Writing serial data output Not used (open).
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open).
85	TRDR	O	Tracking servo drive PWM signal (–) output to the MPC17A36VMEL (IC300)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the MPC17A36VMEL (IC300)
87	DVDD	—	Power supply terminal (+3.3 V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the MPC17A36VMEL (IC300)
89	FRDR	O	Focus servo drive PWM signal (–) output to the MPC17A36VMEL (IC300)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open).

Pin No.	Pin Name	I/O	Pin Description
91	SRDR	O	Sled servo drive PWM signal (–) output to the MPC17A36VMEL (IC300)
92	SFDR	O	Sled servo drive PWM signal (+) output to the MPC17A36VMEL (IC300)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the MPC17A36VMEL (IC300)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the MPC17A36VMEL (IC300)
95	FGIN	I (S)	Input terminal for the test (fixed at “L”.)
96	TEST1	I	
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open).

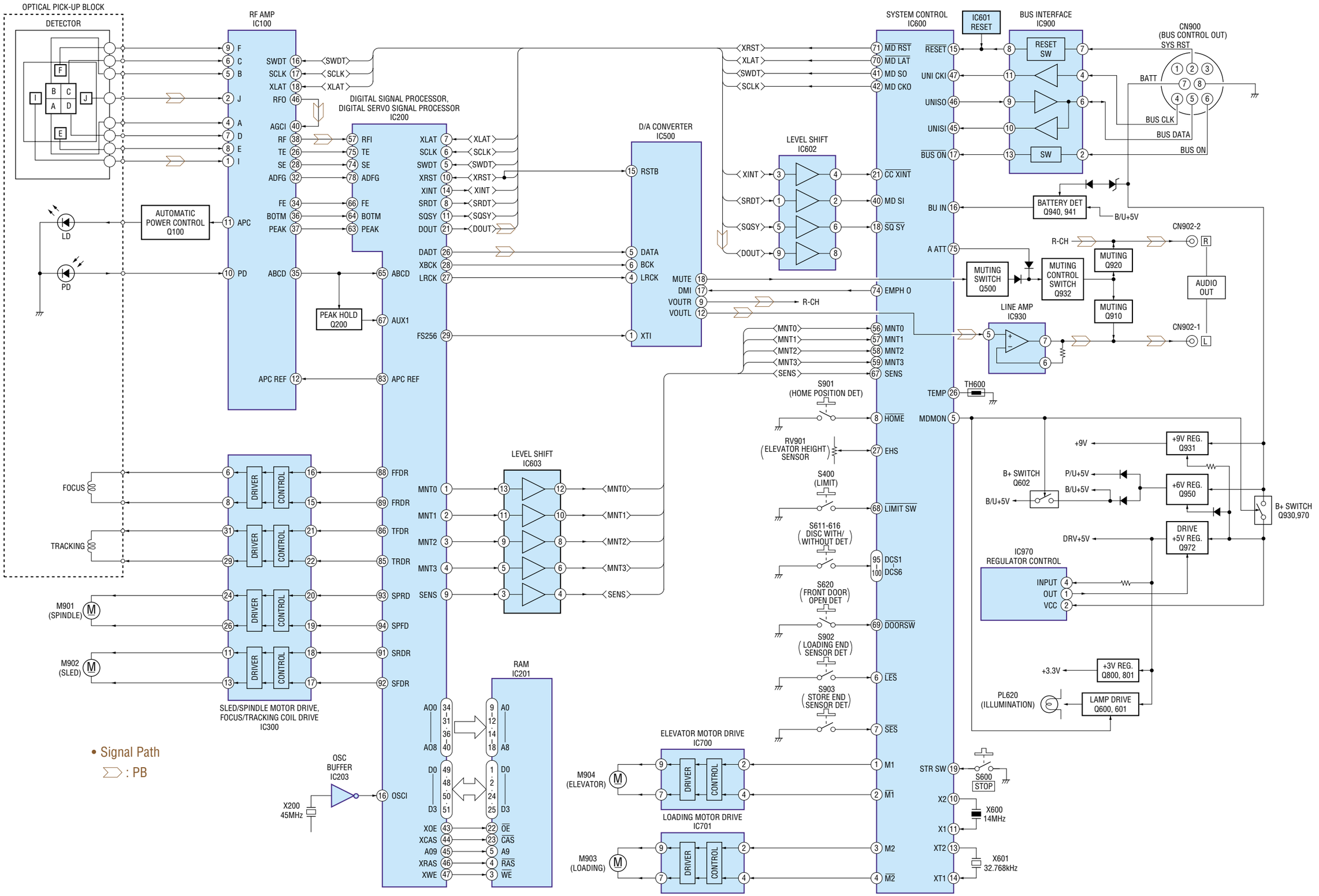
* I (S) stands for schmitt input, I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• IC600 µPD784216AGC-151-8EU (SYSTEM CONTROL)

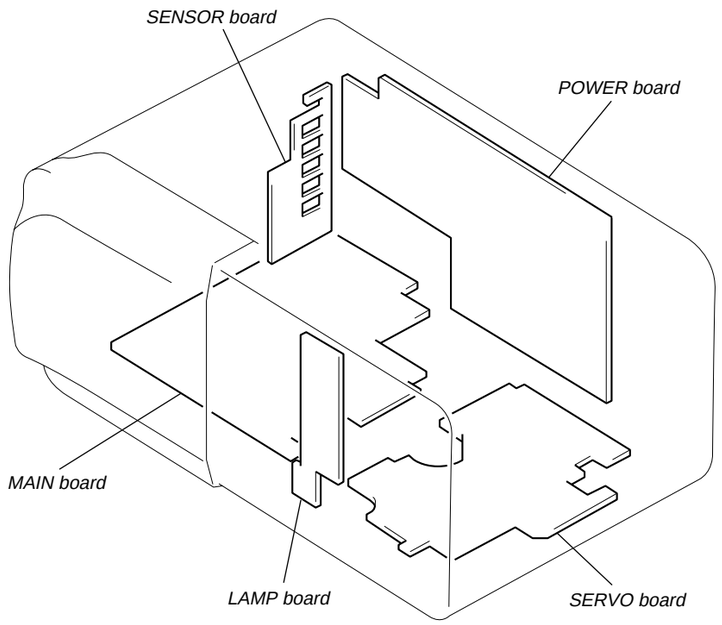
Pin No.	Pin Name	I/O	Pin Description
1	M1	O	Elevator motor (M904) drive signal output
2	$\overline{\text{M1}}$	O	Elevator motor (M904) drive signal output
3	M2	O	Loading motor (M903) drive signal output
4	$\overline{\text{M2}}$	O	Loading motor (M903) drive signal output
5	MDMON	O	Mechanism deck system power control output (“H” : Power ON)
6	$\overline{\text{LES}}$	I	Loading end sensor detection switch (S902) input
7	$\overline{\text{SES}}$	I	Store end sensor detection switch (S903) input
8	$\overline{\text{HOME}}$	I	Home position detection switch (S901) input (“L” : Home position)
9	VDD	—	Power supply pin (+5 V)
10	X2	—	Main system clock connecting pin (14 MHz)
11	X1	—	Main system clock connecting pin (14 MHz)
12	VSS	—	Ground pin
13	XT2	—	Sub system clock connecting pin (32.768 kHz)
14	XT1	—	Sub system clock connecting pin (32.768 kHz)
15	$\overline{\text{RESET}}$	—	System reset input
16	BU IN	I	Backup OFF detection input (“L” : Backup OFF)
17	$\overline{\text{BUS ON}}$	I	BUS OFF detection of SONY BUS (“H” : BUS OFF)
18	$\overline{\text{SQ SY}}$	I	Sub code Q sync input from CXD2662R (IC200)
19	STR SW	I	STOP switch (S600) input
20	—	O	Not used.
21	$\overline{\text{CC XINT}}$	I	Interruption status input from CXD2662R (IC200)
22	—	O	Not used.
23	AVDD	—	Power supply for A/D converter (+5 V)
24	AVREF0	—	Reference voltage for A/D converter
25	INIT	I	Initial input pin at reset (Not used in this set.)
26	TEMP	I	Thermistor connecting pin for temperature detection
27	EHS	I	Elevator height position detection input
28, 29	—	I	Connect to ground.
30 – 32	—	I	Connect to ground.
33	AVSS	—	Analog ground
34	ERR PWM	O	Error data output (Not used in this set.)
35	—	O	Not used.
36	AVREF1	—	Reference voltage for D/A converter
37, 38	—	O	Not used.
39	—	O	Not used.
40	MD SI	I	Read data signal input from CXD2662R (IC200)
41	MD SO	O	Write data signal output to CXA2523AR (IC100) and CXD2662R (IC200)
42	MD CKO	O	Serial clock signal output to CXA2523AR (IC100) and CXD2662R (IC200)
43	—	O	Not used.
44	—	O	Not used.
45	UNISI	I	Serial data input for SONY BUS
46	UNISO	O	Serial data output for SONY BUS
47	UNI CKI	I	Serial clock input for SONY BUS
48	LINKOFF	O	Link control signal output for SONY BUS (“H” : Link OFF) (Not used in this set.)
49	—	O	Not used.
50	—	I	Not used.
51, 52	D-BASS1, 2	O	Digital D-BASS select output 1, 2 (Not used in this set.)
53 – 55	—	O	Not used.
56 – 59	MNT0 – 3	I	Monitor 0 – 3 signal input from CXD2662R (IC200)
60	AGING	O	Not used.
61	AGCHK	O	Not used.
62	TFTON	O	Not used.

Pin No.	Pin Name	I/O	Pin Description
63	—	O	Not used.
64	EE CS	O	Chip select output to EEPROM (Not used in this set.)
65	EE CKO	O	Serial clock output to EEPROM (Not used in this set.)
66	EE SIO	I/O	Data input/output to EEPROM (Not used in this set.)
67	SENS	I	Internal status input from CXD2662R (IC200)
68	$\overline{\text{LIMIT SW}}$	I	Optical pick-up innermost track limit position detection switch (S400) input
69	$\overline{\text{DOORSW}}$	I	Front door open detection switch (S620) input (“L” : Open complete)
70	$\overline{\text{MD LAT}}$	O	Serial latch signal output to CXA2523AR (IC100) and CXD2662R (IC200)
71	$\overline{\text{MD RST}}$	O	Reset signal output to CXD2662R (IC200)
72	VSS	—	Ground pin
73	MD ON	O	Servo system power control output (“H” : Power ON) (Not used in this set.)
74	EMPH O	O	De-emphasis circuit control output (“H” : De-emphasis ON)
75	A ATT	O	Analog mute control output (“H” : Mute ON)
76	ILLON	O	Illumination lamp light-up control output (“H” : Lamp light-up) (Not used in this set.)
77	TSTSMD	I	Single mode setting pin (“L” : Single mode)
78	TSTCKO	O	Serial clock output to LED for TEST mode display (Not used in this set.)
79	TSTSO	O	Serial data output to LED for TEST mode display (Not used in this set.)
80	TSTMOD	I	TEST mode setting pin (“L” : TEST mode)
81	VDD	—	Power supply pin (+5 V)
82 – 85	TSTOUT0 – 3	O	TEST key output pin of 4 × 8 matrix (Not used in this set.)
86 – 93	TSTIN0 – 7	I	TEST key input pin of 4 × 8 matrix (Not used in this set.)
94	TEST/VPP	—	Fixed at “L” in this set.
95	DCS1	I	Disc with/without detection 1 switch (S611) input (“H” : with disc)
96	DCS2	I	Disc with/without detection 2 switch (S612) input (“H” : with disc)
97	DCS3	I	Disc with/without detection 3 switch (S613) input (“H” : with disc)
98	DCS4	I	Disc with/without detection 4 switch (S614) input (“H” : with disc)
99	DCS5	I	Disc with/without detection 5 switch (S615) input (“H” : with disc)
100	DCS6	I	Disc with/without detection 6 switch (S616) input (“H” : with disc)

4-2. BLOCK DIAGRAM



4-3. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from Master unit.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PB
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⋁ : PB

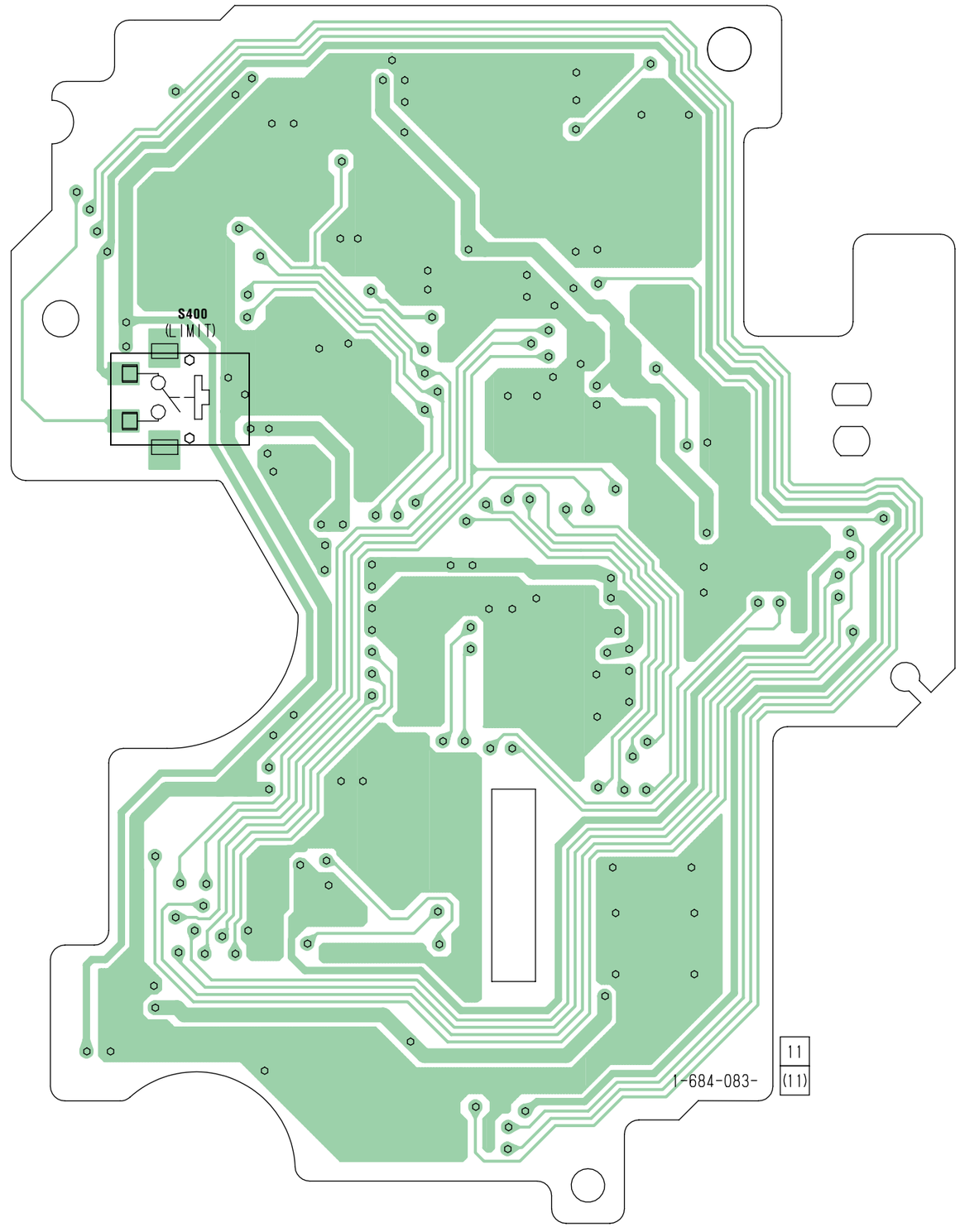
for printed wiring boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ○ : Through hole. (Servo and Power Sections)
- ● : Through hole. (Main Section)
- ▬ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

4-4. PRINTED WIRING BOARD — SERVO SECTION — • Refer to page 19 for Circuit Boards Location.

【SERVO BOARD】(SIDE B)



• **Waveforms — Servo Board —**

① Approx. 150mVp-p
200mV/DIV, 10µsec/DIV
IC100 ④ (A) PLAY MODE

② Approx. 150mVp-p
100mV/DIV, 10µsec/DIV
IC100 ⑧ (E) PLAY MODE

③ Approx. 150mVp-p
100mV/DIV, 10µsec/DIV
IC100 ⑨ (F) PLAY MODE

④ 150mVp-p
100mV/DIV, 10µsec/DIV
IC100 ①, ② (I, J)
PLAY MODE

⑤ Approx. 1.1Vp-p
500mV/DIV, 1µsec/DIV
IC100 ㊳ (RF) PLAY MODE

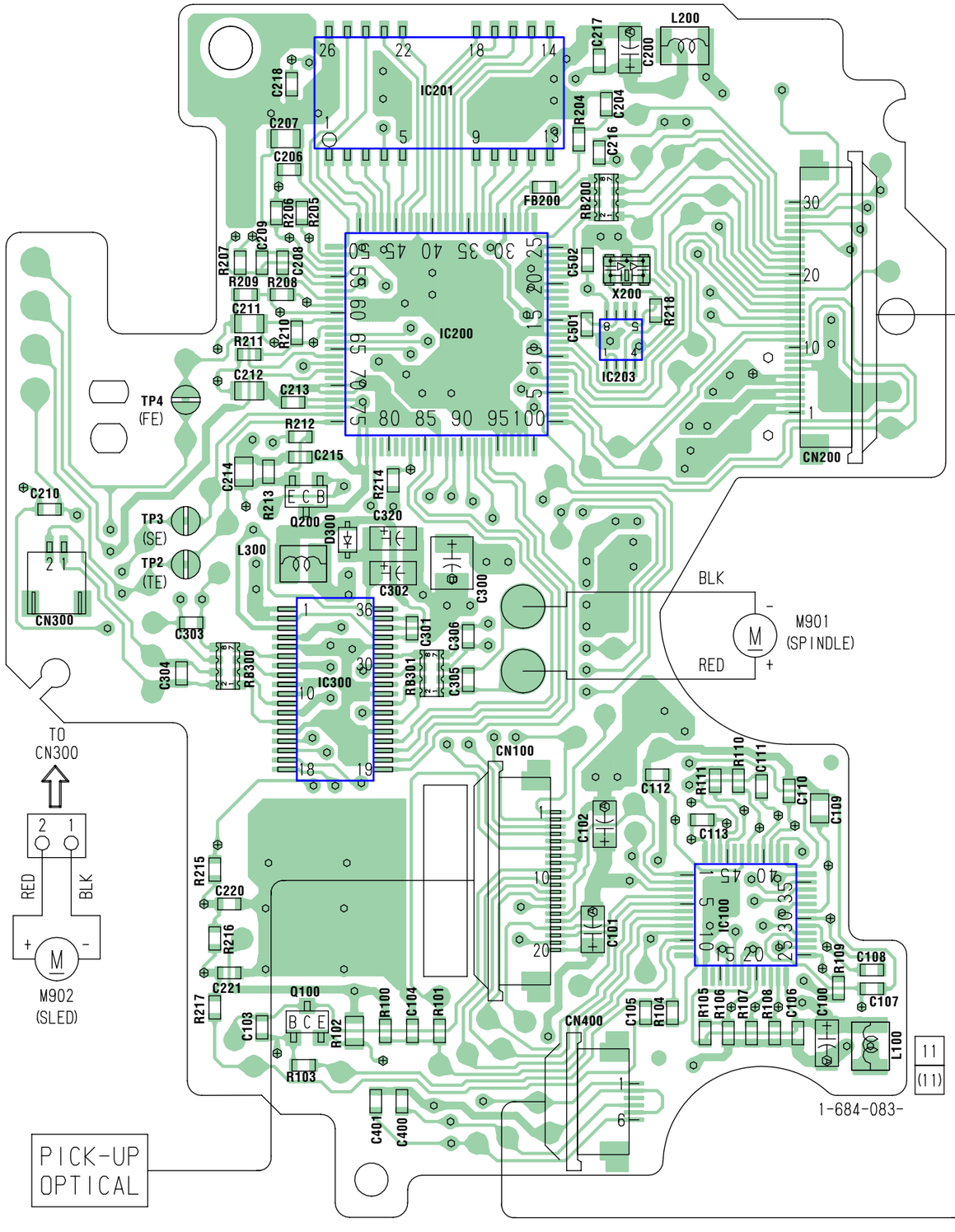
⑥ 400mVp-p
200mV/DIV, 0.5msec/DIV
IC100 ㉞ (FE) PLAY MODE
IC200 ⑯ (FE) PLAY MODE

⑦ 2Vp-p
500mV/DIV, 0.5msec/DIV
IC100 ㉖ (TE) PLAY MODE
IC200 ㉕ (TE) PLAY MODE

⑧ 3.2Vp-p, 22.7µsec
IC200 ㉗ (LRCK)

⑨ 3.2Vp-p, 354nsec
IC200 ㉘ (XBCK)

【SERVO BOARD】(SIDE A)



【SERVO FLEXIBLE BOARD】

1-668-264-

11

1

MAIN BOARD
CN500
(Page 25)

【EHS FLEXIBLE BOARD】

1-658-880-

11

S901
HOME
POSITION DET

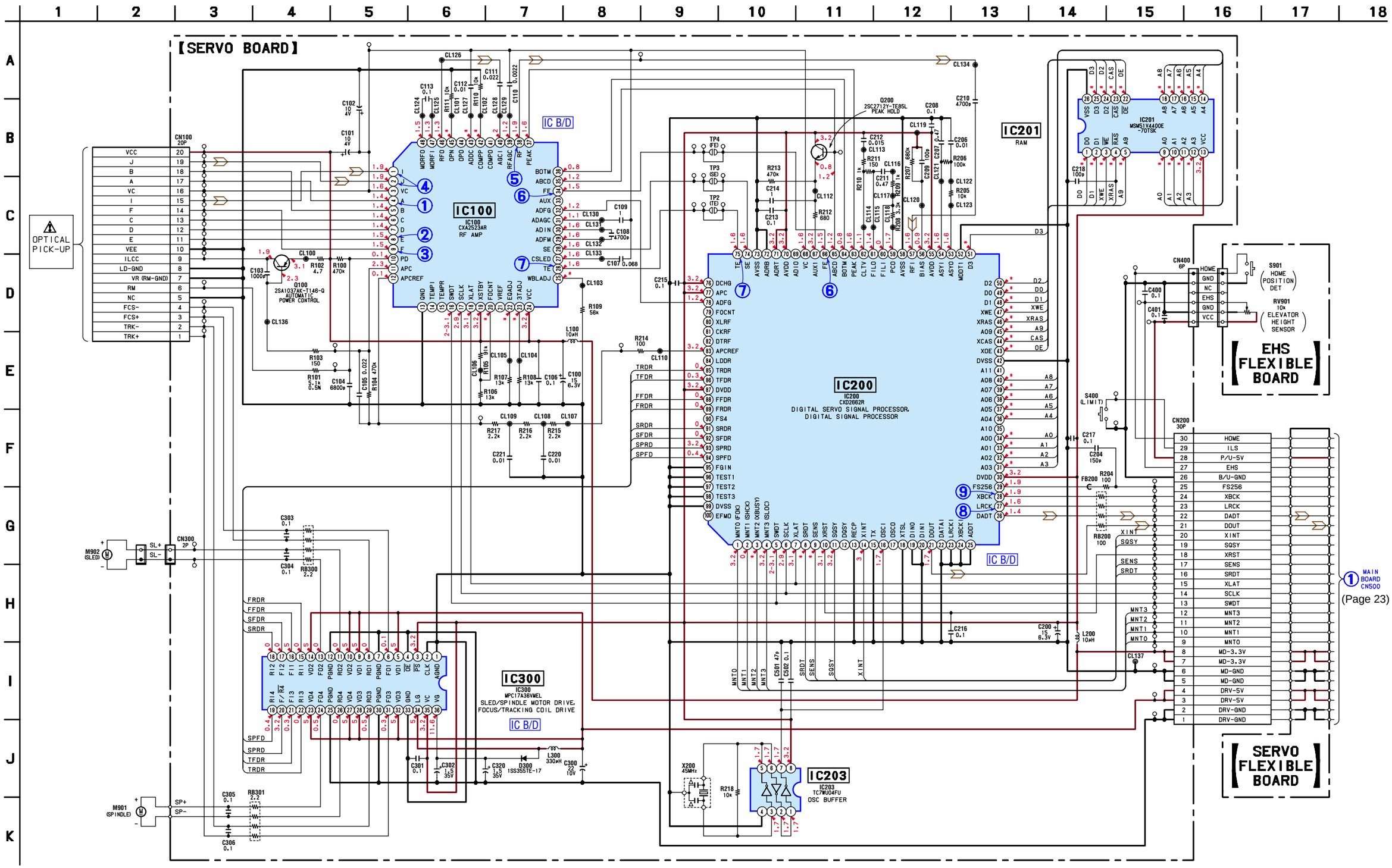
RV901
(ELEVATOR HEIGHT SENSOR)

• **Semiconductor Location**

Ref. No.	Location
D300	E-3
IC100	H-6
IC200	D-4
IC201	B-4
IC203	D-5
IC300	F-3
Q100	I-3
Q200	E-3

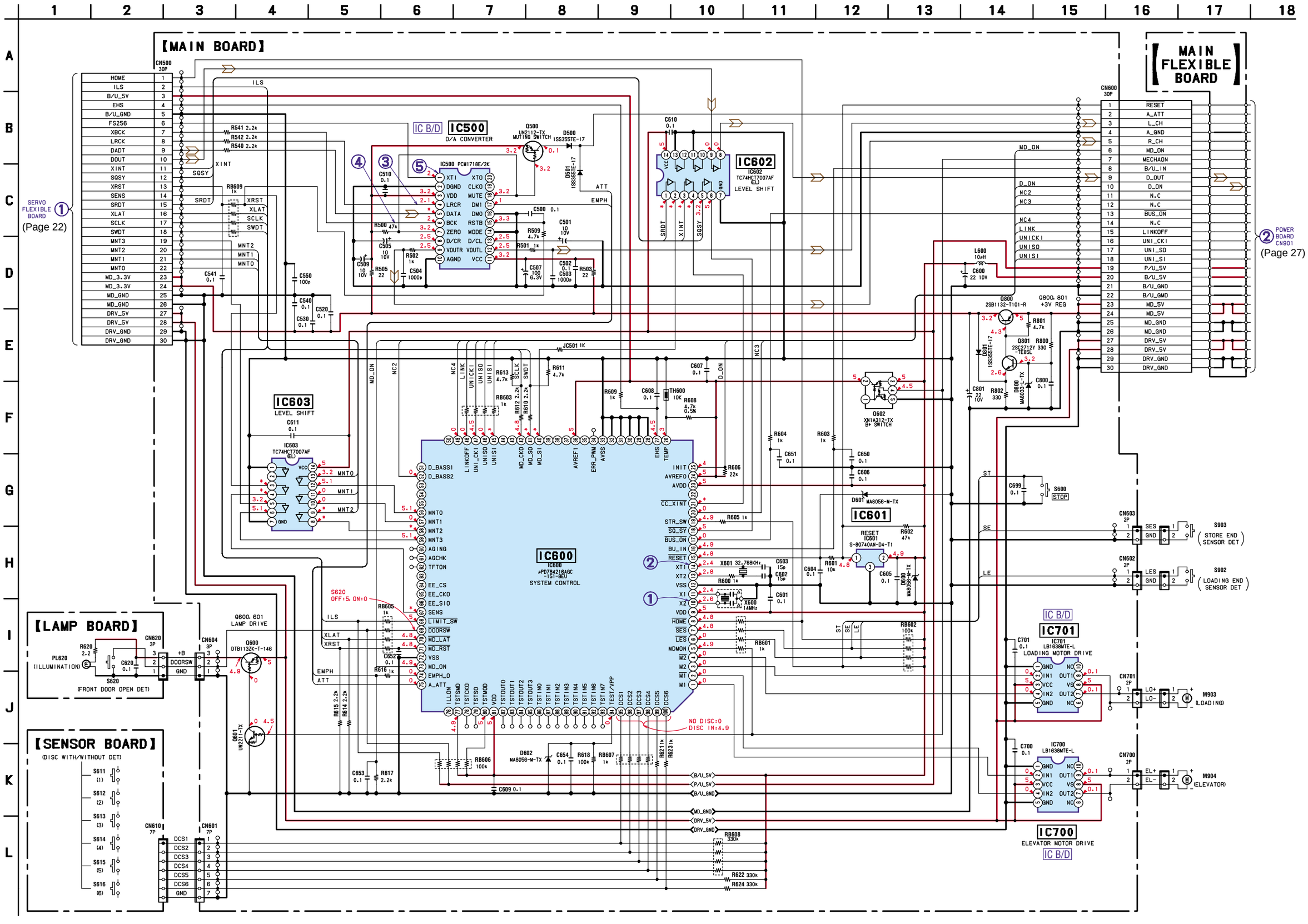
4-5. SCHEMATIC DIAGRAM — SERVO SECTION —

• Refer to page 20 for Waveforms.
• Refer to page 28 for IC Block Diagrams.



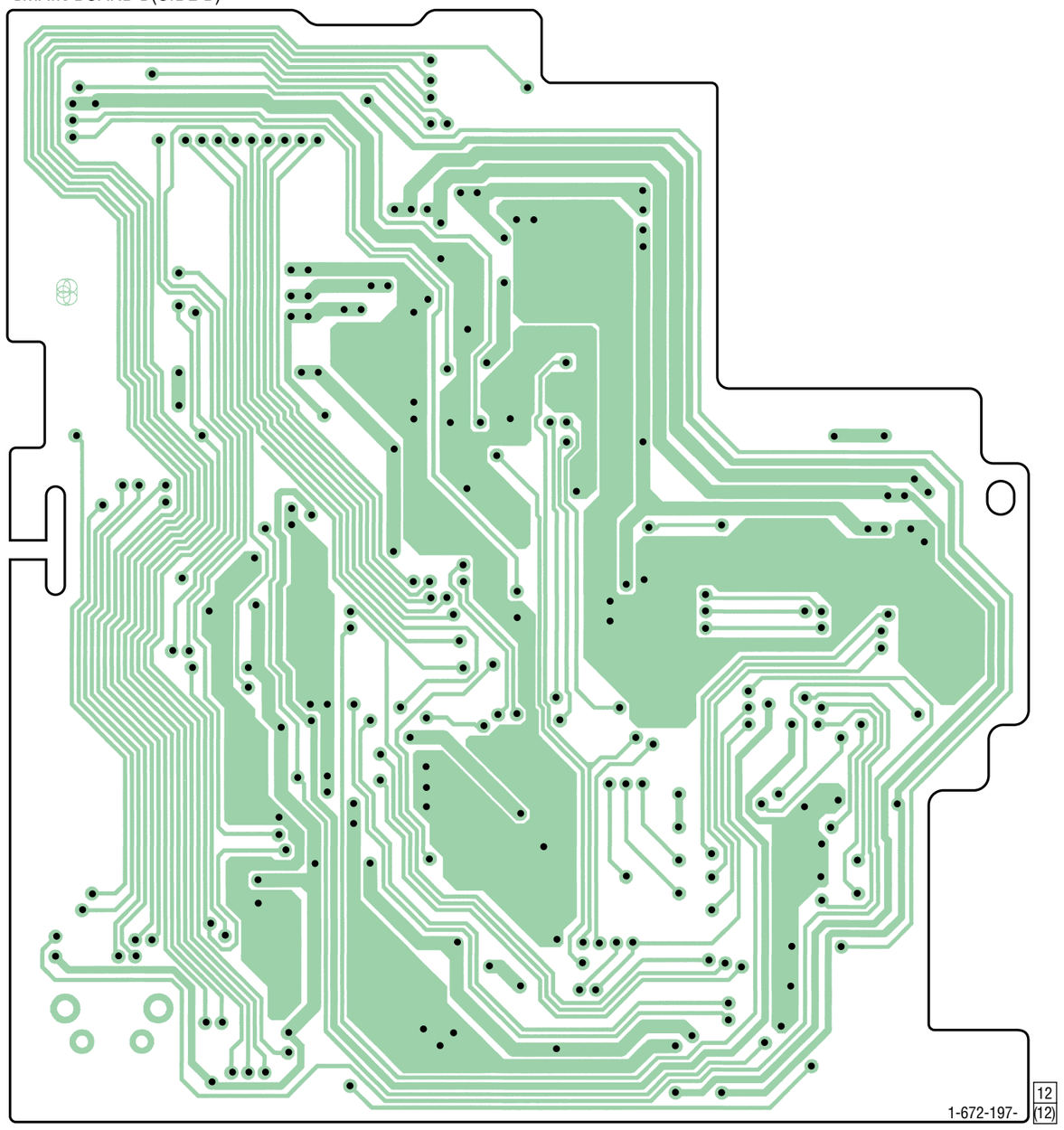
• Refer to page 24 for Waveforms.
• Refer to page 28 for IC Block Diagrams.

4-6. SCHEMATIC DIAGRAM — MAIN SECTION —



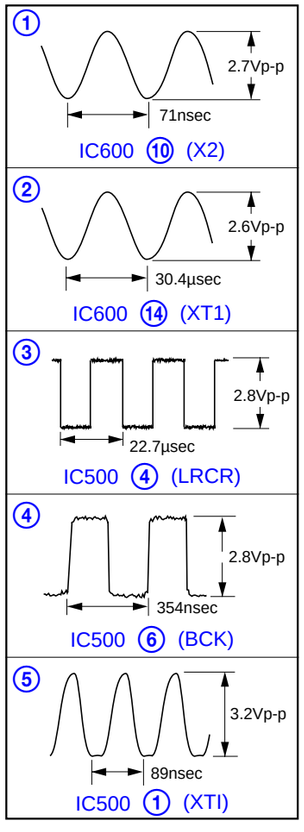
4-7. PRINTED WIRING BOARDS — MAIN SECTION — • Refer to page 19 for Circuit Boards Location.

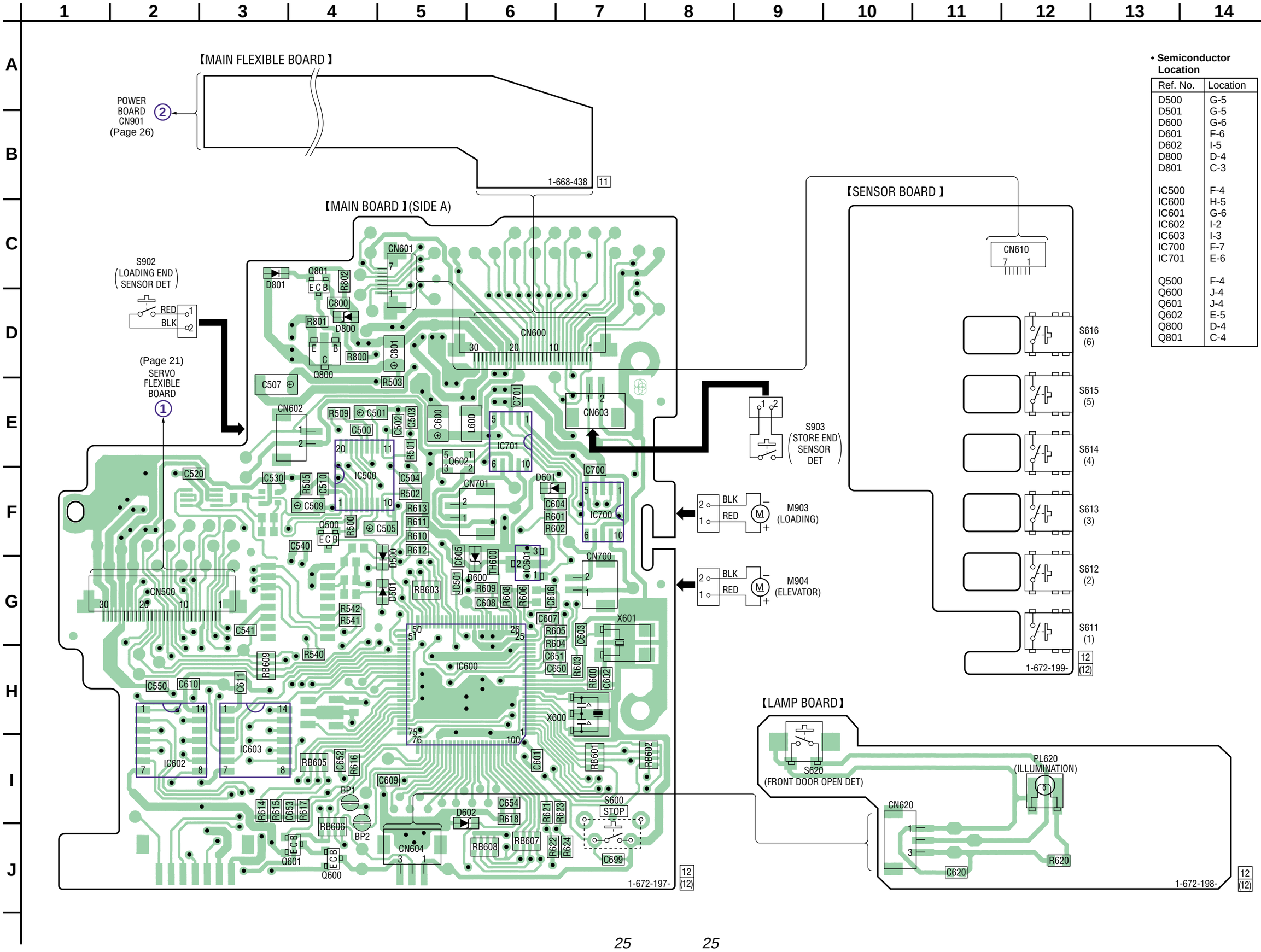
【MAIN BOARD 】(SIDE B)



• **Waveforms**

— Main Board —



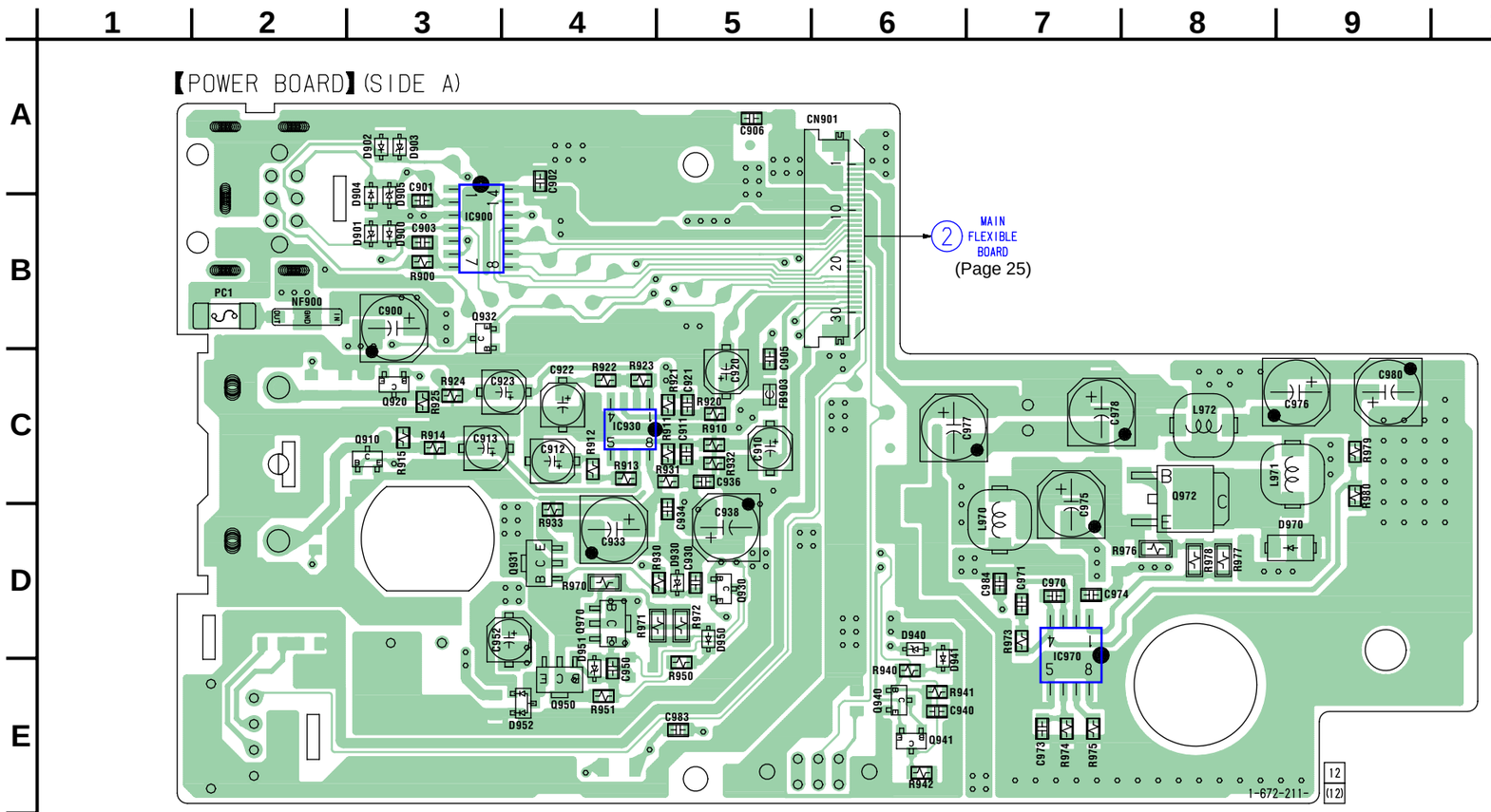


- **Semiconductor Location**

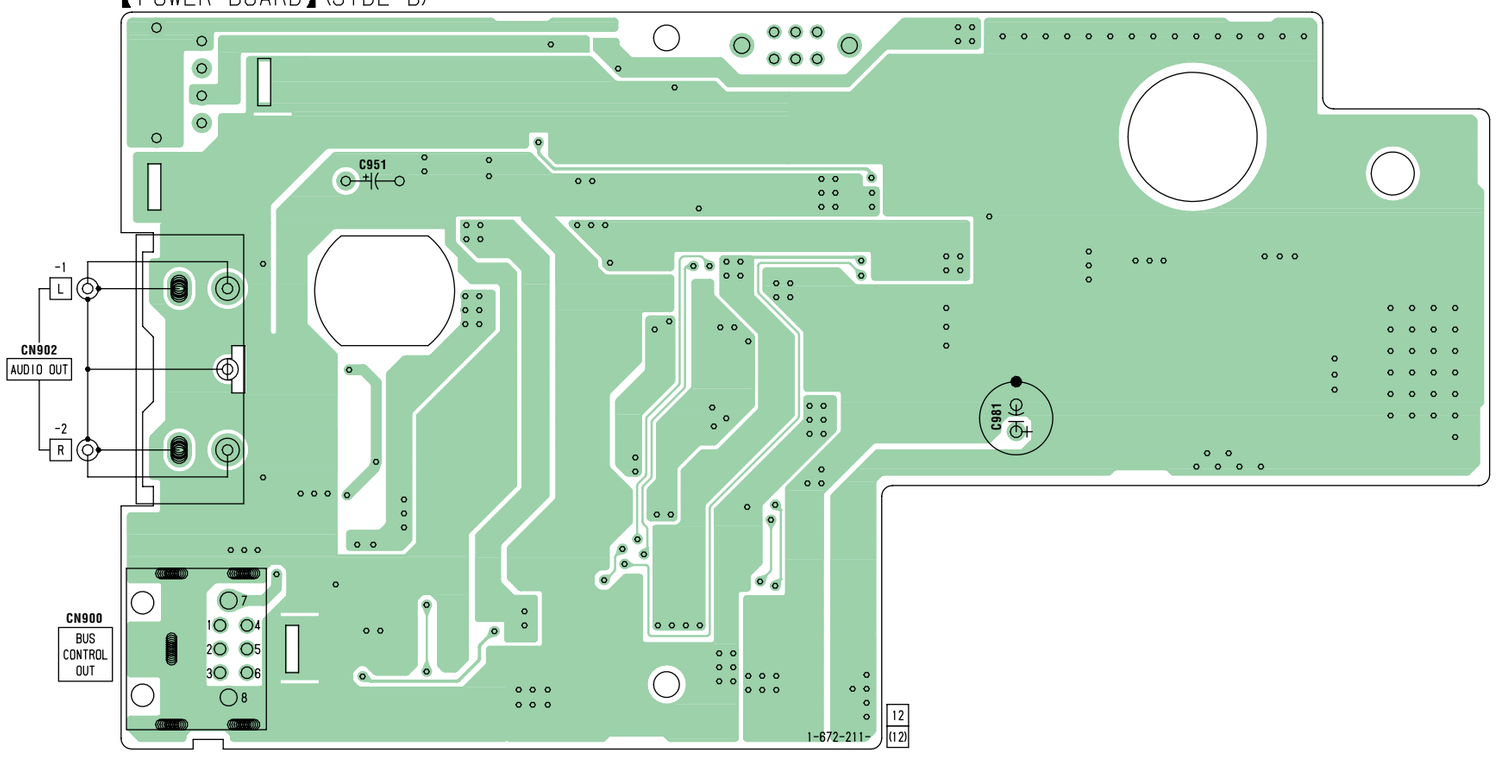
Ref. No.	Location
D500	G-5
D501	G-5
D600	G-6
D601	F-6
D602	I-5
D800	D-4
D801	C-3
IC500	F-4
IC600	H-5
IC601	G-6
IC602	I-2
IC603	I-3
IC700	F-7
IC701	E-6
Q500	F-4
Q600	J-4
Q601	J-4
Q602	E-5
Q800	D-4
Q801	C-4

4-8. PRINTED WIRING BOARD — POWER SECTION — • Refer to page 19 for Circuit Boards Location.

【POWER BOARD】(SIDE A)



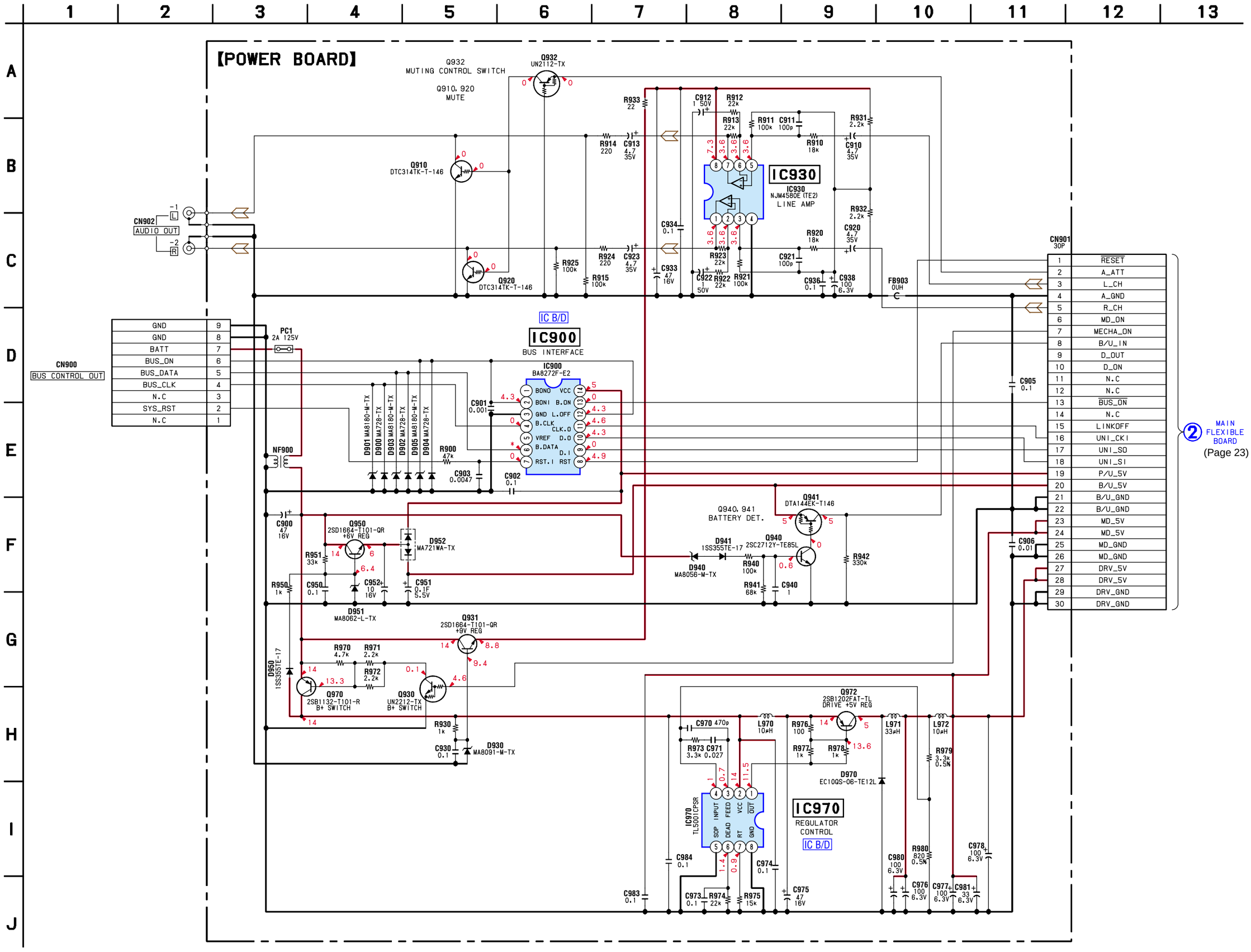
【POWER BOARD】(SIDE B)



• **Semiconductor Location**

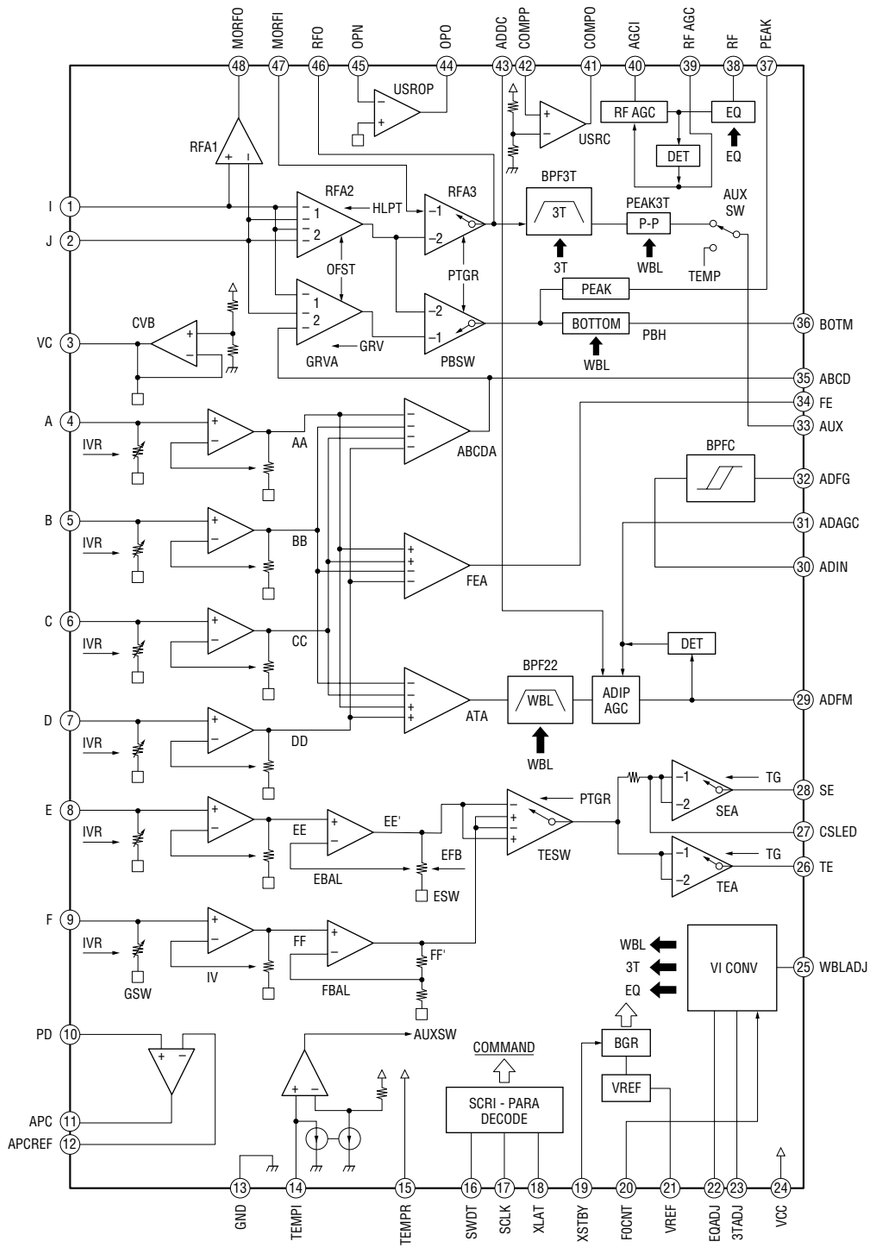
Ref. No.	Location
D900	B-3
D901	B-3
D902	A-3
D903	A-3
D904	B-3
D905	B-3
D930	D-5
D940	D-6
D941	E-6
D950	D-5
D951	D-4
D952	E-4
D970	D-9
IC900	B-3
IC930	C-4
IC970	E-7
Q910	C-3
Q920	C-3
Q930	D-5
Q931	D-4
Q932	B-3
Q940	E-6
Q941	E-6
Q950	E-4
Q970	D-4
Q972	C-8

4-9. SCHEMATIC DIAGRAM — POWER SECTION — • Refer to page 29 for IC Block Diagrams.

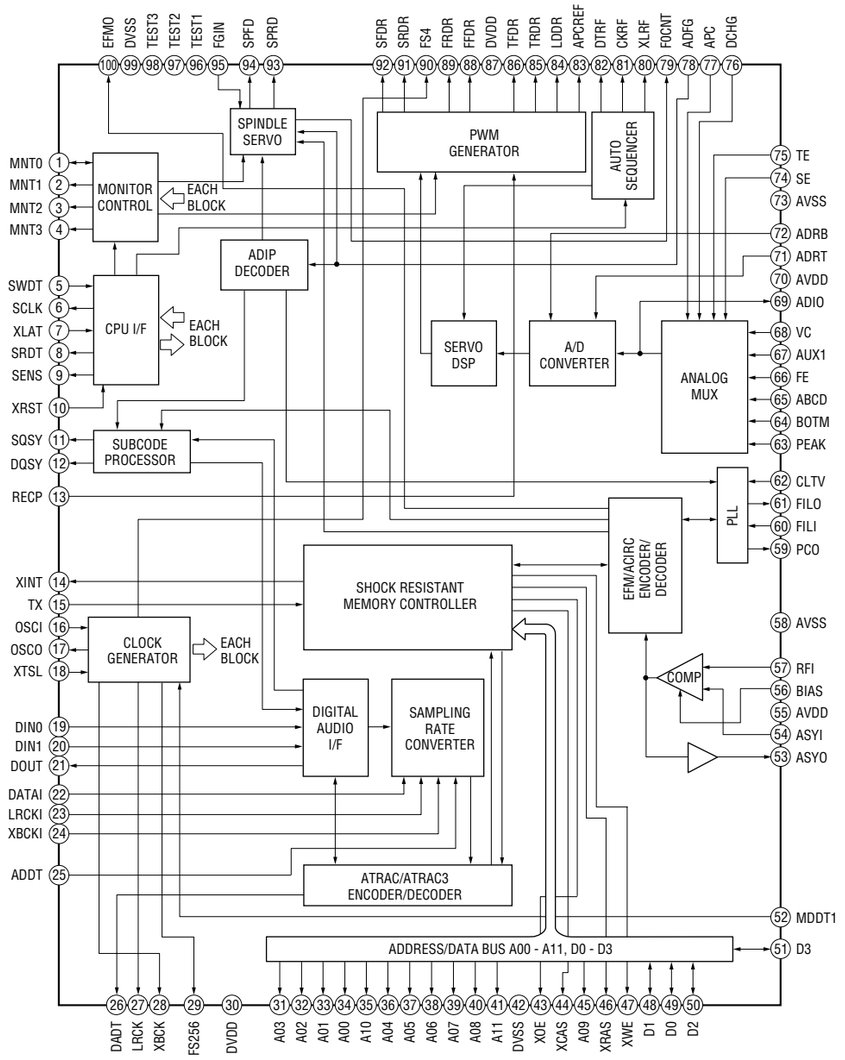


• IC BLOCK DIAGRAMS

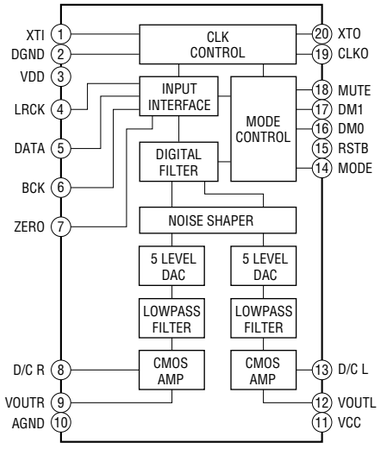
IC100 CXA2523AR



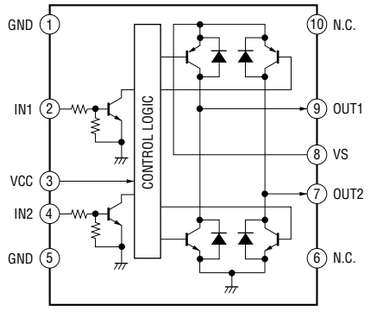
IC200 CXA2662R



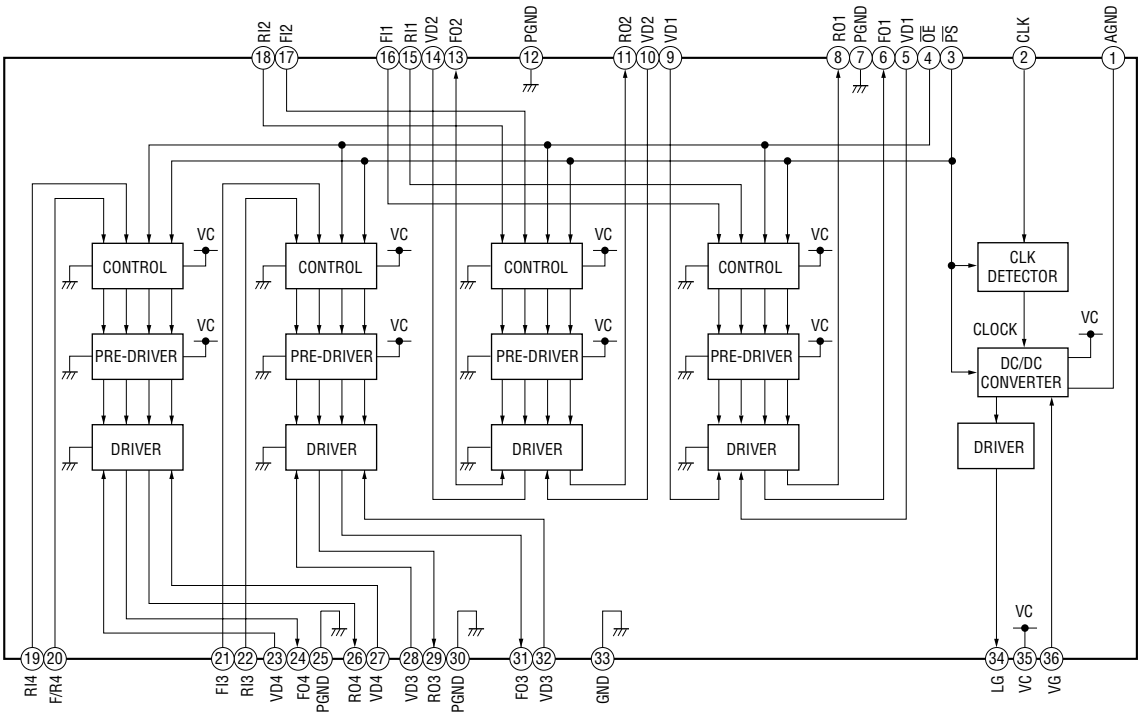
IC500 PCM1718E/2K



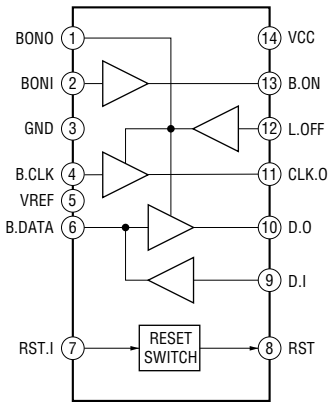
IC700 LB1638MTE-L
IC701 LB1638MTE-L



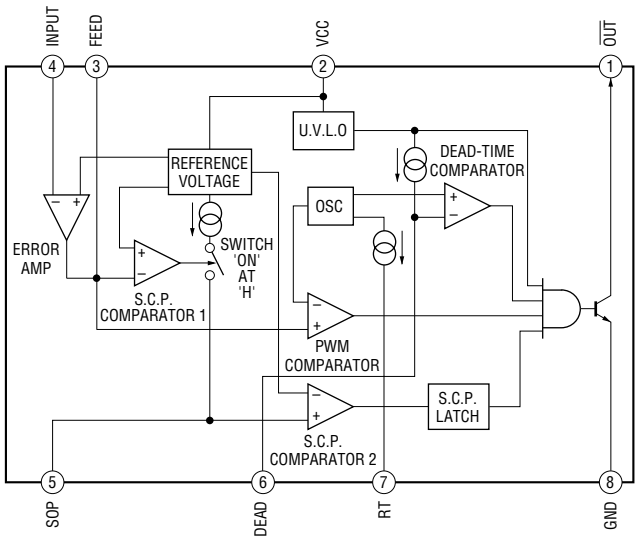
IC300 MPC17A36VMEL



IC900 BA8272F-E2



IC970 TL5001CPSR



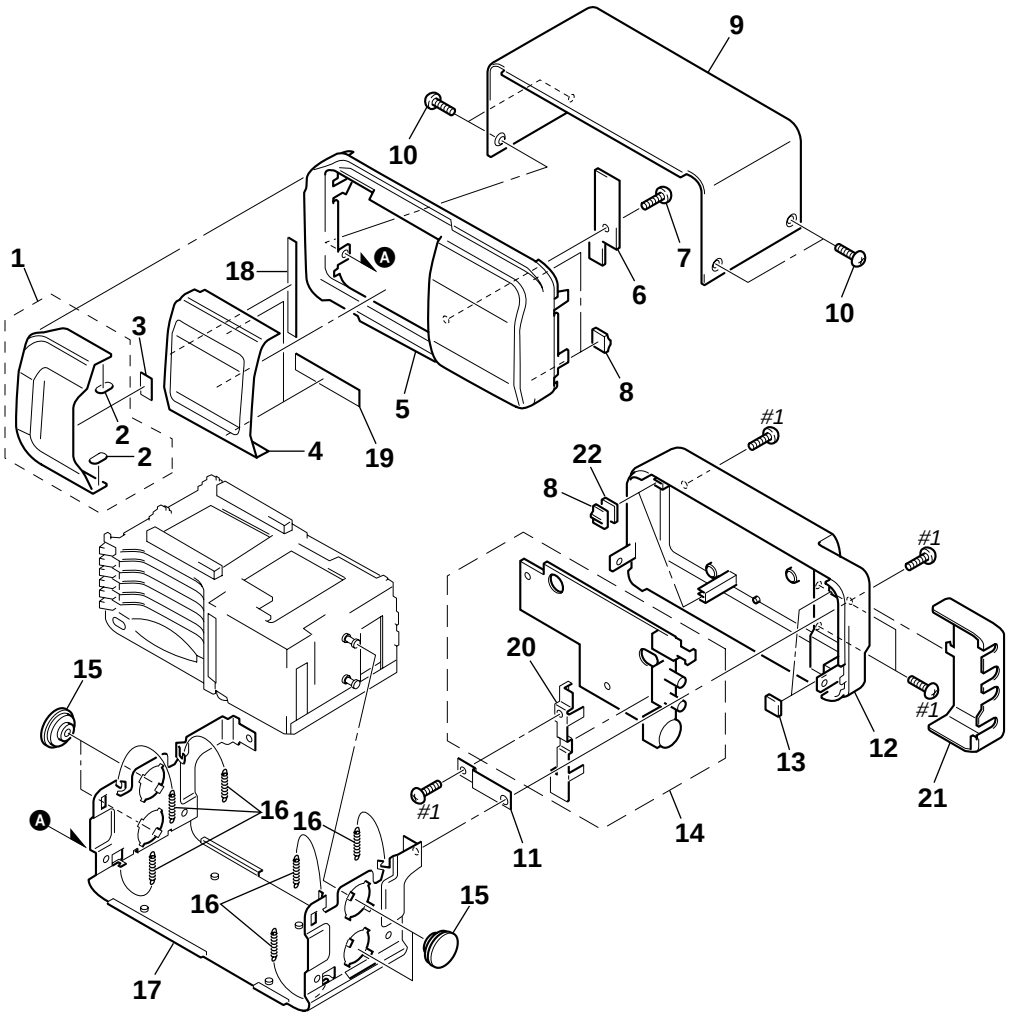
SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.
- Abbreviation
  CND: Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

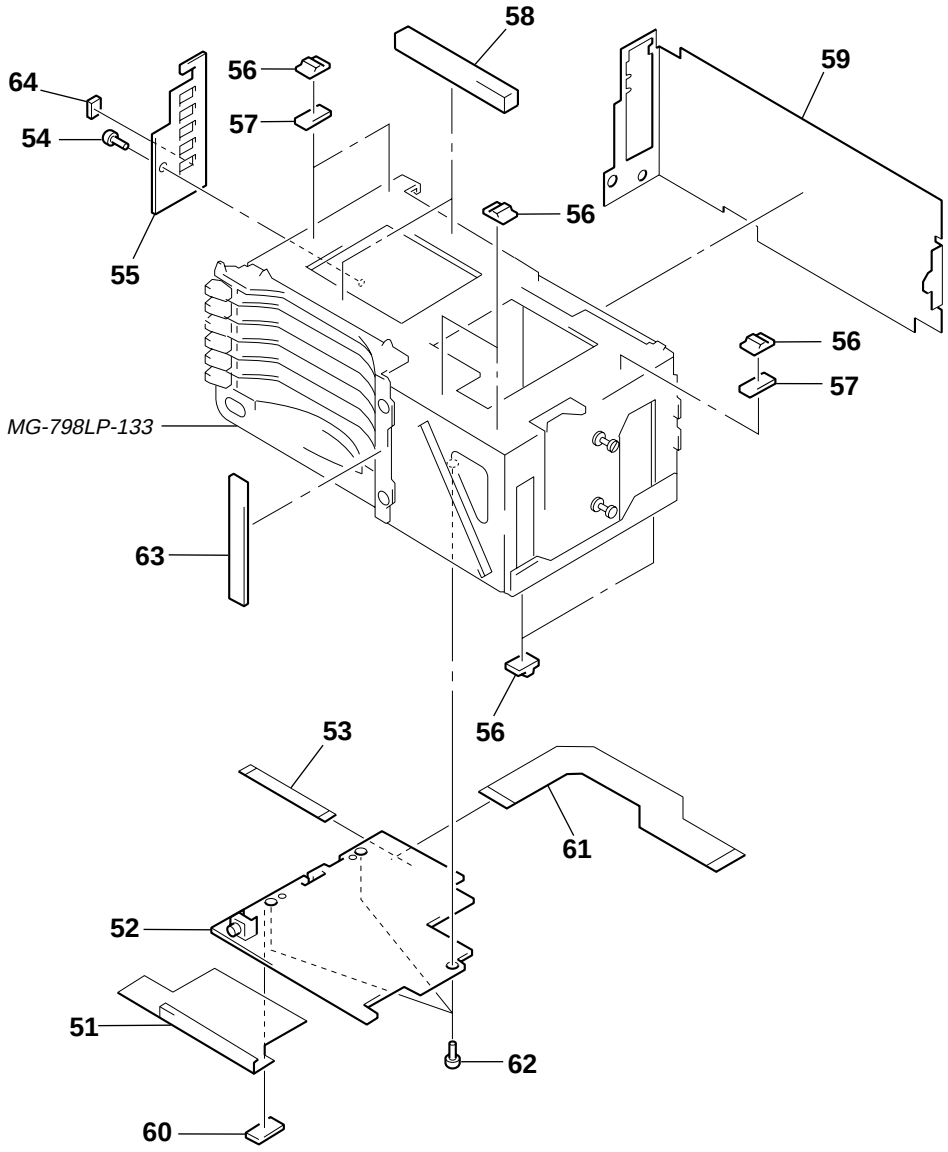
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CASE SECTION



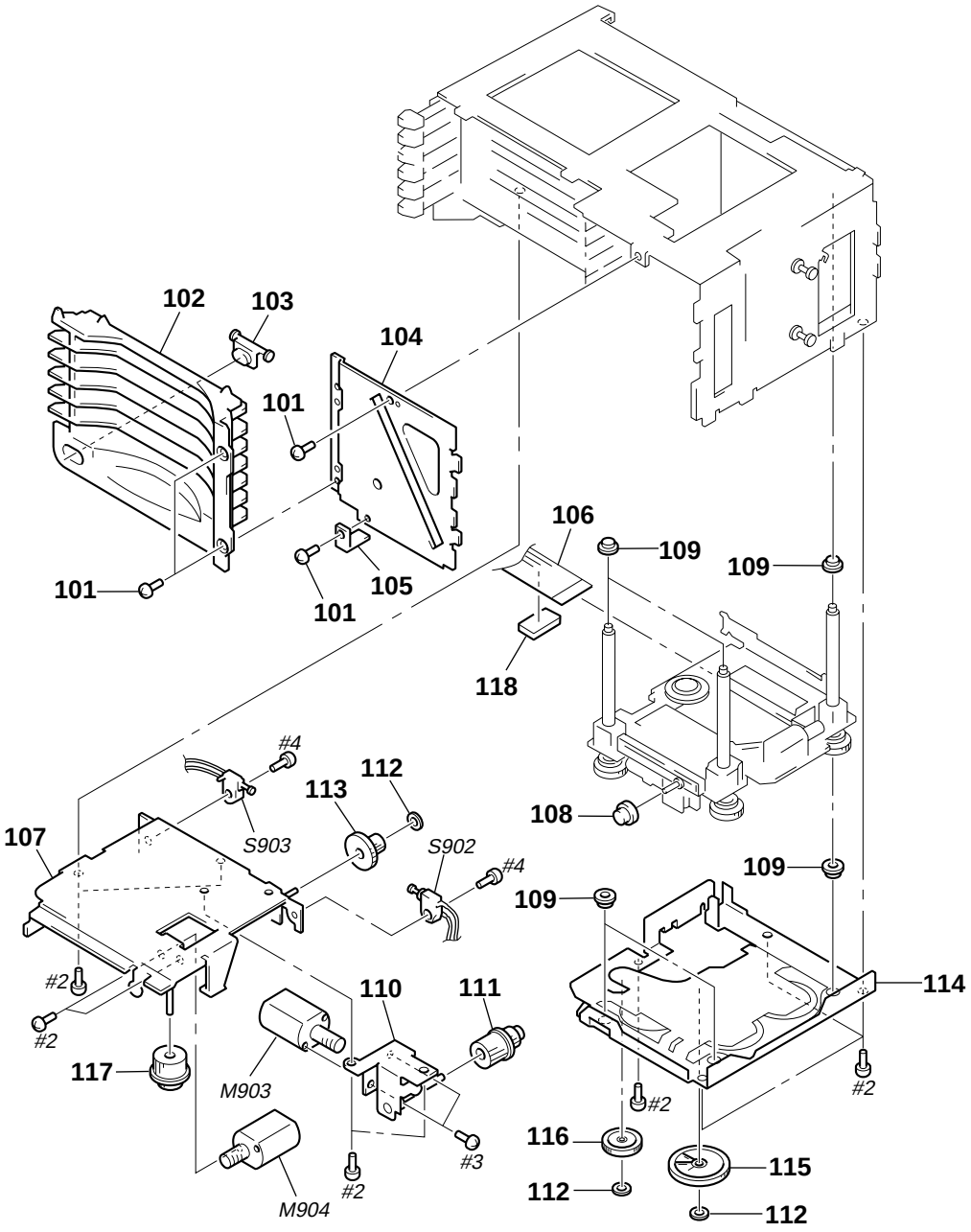
Ref. No.	Part No.	Description	Remark
1	X-3381-687-1	DOOR (P) ASSY	
2	3-930-744-01	SPACER (DOOR)	
3	3-831-441-11	CUSHION, RATTLE ABSORBER	
4	X-3381-688-1	DOOR (S) ASSY	
5	X-3381-685-1	PANEL (FRONT) ASSY	
* 6	1-672-198-12	LAMP BOARD	
7	3-909-607-01	SCREW	
8	3-348-750-01	CUSHION (DAMPER)	
9	3-031-481-21	CASE (UPPER)	
10	3-912-956-11	SCREW (2.6X6) (CU), +BVTT	
* 11	3-031-489-01	PLATE, GROUND	
12	X-3381-686-1	PANEL (REAR) ASSY	
13	3-931-697-01	CUSHION (STOPPER)	
* 14	A-3294-938-A	POWER BOARD, COMPLETE	
15	3-930-176-01	DAMPER (798)	
16	3-930-177-01	SPRING (FL), TENSION	
17	3-031-482-21	CASE (LOWER)	
18	3-025-283-01	SHEET (DOOR S1)	
19	3-242-774-01	SHEET (DOOR S2)	
* 20	3-031-503-01	BRACKET	
21	3-031-483-21	COVER	
* 22	3-036-154-01	CUSHION (FP)	
#1	7-685-793-09	SCREW +PTT 2.6X8 (S)	

5-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
* 51	3-931-149-02	SHEET (MAIN PC BOARD)	
52	A-3283-298-A	MAIN BOARD, COMPLETE	
53	1-776-474-11	CABLE, FLAT 7P	
54	3-909-412-01	SCREW (+P) (1.7X2) (TYPE 3)	
55	A-3340-373-A	SENSOR BOARD, COMPLETE	
56	3-348-750-01	CUSHION (DAMPER)	
* 57	3-715-973-01	CUSHION	
58	3-931-699-01	CUSHION (ROLL H)	
* 59	3-931-025-21	SHEET (MECHANICAL DECK)	
* 60	3-021-073-01	CUSHION (MAIN)	
61	1-668-438-11	MAIN FLEXIBLE BOARD	
62	3-880-990-00	SCREW (1.7X3), FLAT, (+) SPECIAL	
* 63	3-024-303-01	CUSHION (F)	
64	3-036-154-11	CUSHION (FP)	

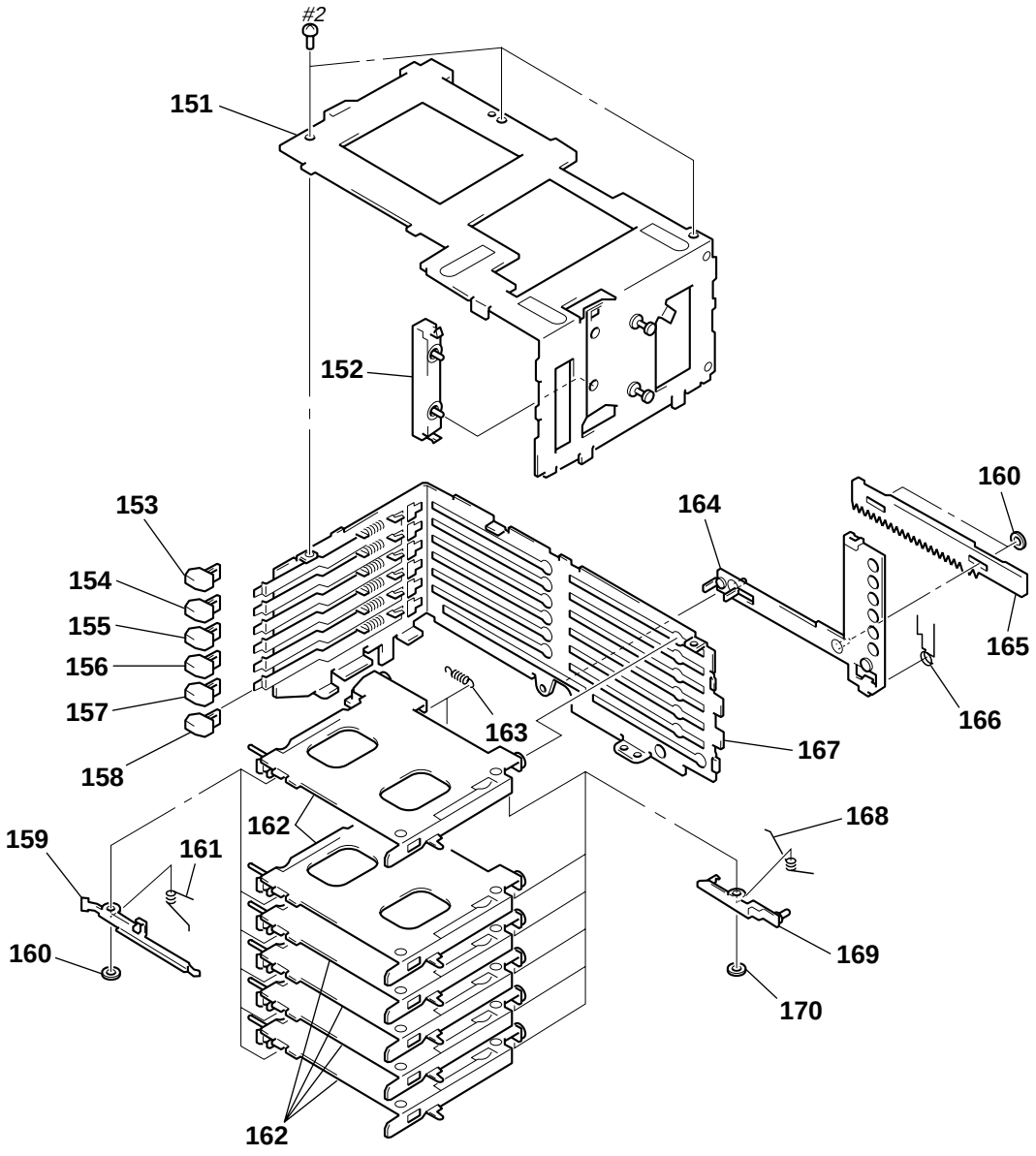
5-3. MD SECTION (1)
(MG-798LP-133)



Ref. No.	Part No.	Description	Remark
101	3-317-552-71	SCREW (M1.7)	
102	3-930-314-01	ESCUTCHEON	
103	3-930-319-01	BUTTON (STOP)	
* 104	3-930-320-01	CHASSIS (FRONT)	
105	3-931-366-01	STOPPER, LEAD	
106	1-668-264-11	SERVO FLEXIBLE BOARD	
* 107	X-3374-669-1	CHASSIS (MOTOR) ASSY	
108	3-930-310-01	COLLAR (EHS)	
109	3-930-312-02	BEARING (ELV)	
110	X-3374-673-1	BRACKET (LD2) ASSY	
111	3-930-365-01	WHEEL (LD), WORM	
112	3-377-719-11	WASHER, POLYETHYLENE	
113	3-930-317-01	GEAR (LD)	

Ref. No.	Part No.	Description	Remark
* 114	X-3374-670-1	CHASSIS (BOTTOM) ASSY	
115	3-930-313-01	GEAR (ELVC)	
116	3-020-386-01	GEAR (ELVA2)	
117	3-020-363-01	WHEEL (ELV2), WORM	
* 118	3-741-875-01	SHEET, RUBBER	
M903	X-3371-508-2	MOTOR ASSY, LD (LOADING)	
M904	X-3374-812-1	MOTOR ASSY, ELV (ELEVATOR)	
S902	1-570-771-11	SWITCH (LOADING END SENSOR DET)	
S903	1-570-771-21	SWITCH (STORE END SENSOR DET)	
#2	7-627-852-37	SCREW, PRECISION +P 1.7X1.8 TYPE3	
#3	7-627-554-07	SCREW, PRECISION +P 2X2.2	
#4	7-627-855-07	SCREW, PRECISION +P 2X5.5 TYPE3	

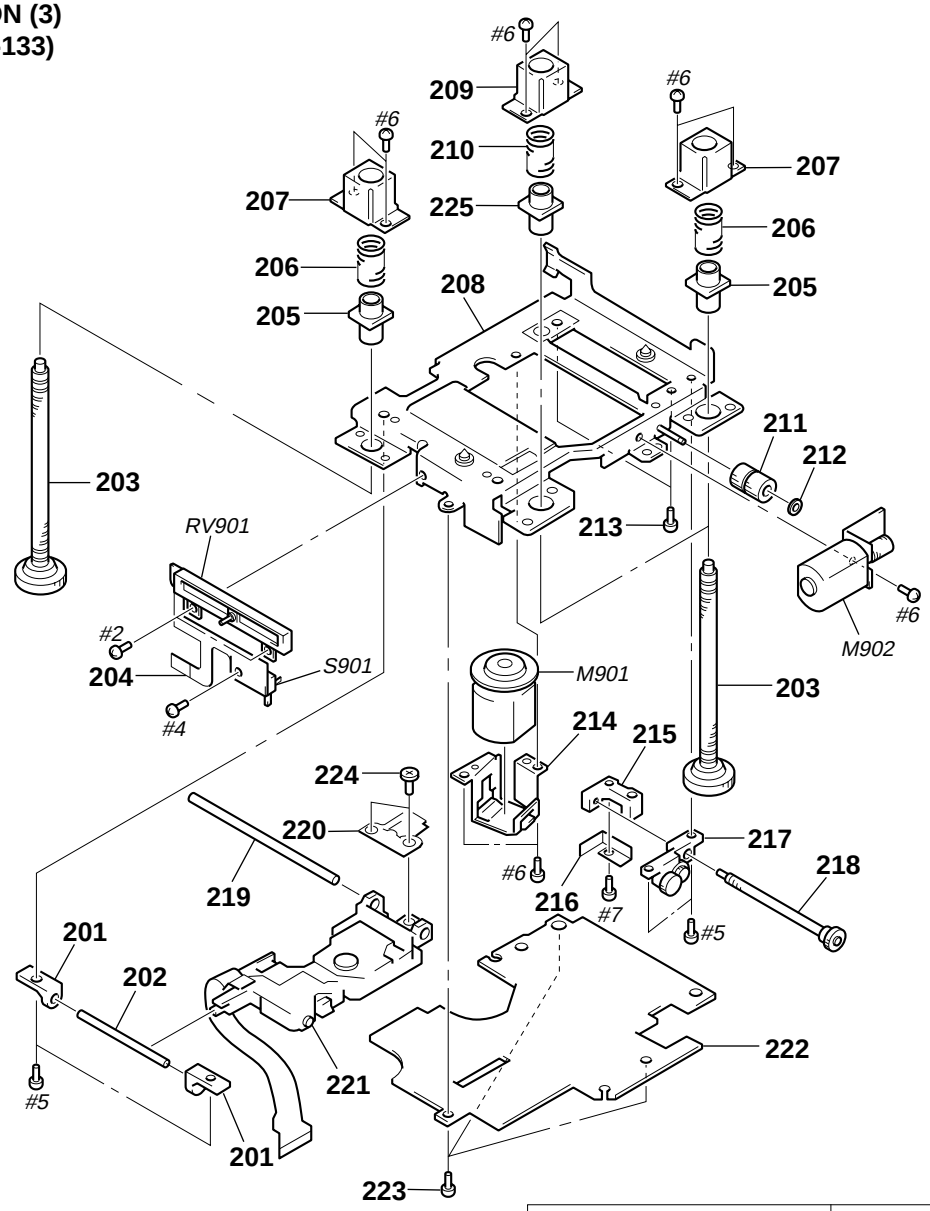
5-4. MD SECTION (2)
(MG-798LP-133)



Ref. No.	Part No.	Description	Remark
* 151	X-3371-209-3	CHASSIS (TOP) ASSY	
* 152	3-020-388-01	GUIDE (HOLDER 2)	
153	3-930-318-01	BUTTON (EJECT)	
154	3-930-318-11	BUTTON (EJECT)	
155	3-930-318-21	BUTTON (EJECT)	
156	3-930-318-31	BUTTON (EJECT)	
157	3-930-318-41	BUTTON (EJECT)	
158	3-930-318-51	BUTTON (EJECT)	
159	3-040-662-02	LEVER, DISC EJECT	
160	3-377-719-11	WASHER, POLYETHYLENE	
161	3-930-350-01	SPRING (EJ), TORSION	

Ref. No.	Part No.	Description	Remark
162	X-3378-169-1	HOLDER (CADDIE) ASSY	
163	3-930-352-01	SPRING (D LOCK), TENSION	
164	X-3375-509-1	SLIDER (3) ASSY, LOADING	
165	3-930-366-01	RACK (LOADING)	
166	3-930-360-01	SPRING (LIMITER), TORSION	
167	X-3374-671-1	CHASSIS (REAR 2) ASSY	
168	3-930-349-01	SPRING (LOCK), TORSION	
169	X-3378-251-1	PLATE (HOLDER) ASSY, LOCK	
170	3-021-511-01	WASHER	
#2	7-627-852-37	SCREW, PRECISION +P 1.7X1.8 TYPE3	

5-5. MD SECTION (3)
(MG-798LP-133)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
201	3-930-338-01	HOLDER (OP GUIDE B)	
202	3-930-332-01	GUIDE (OPB)	
203	X-3371-212-1	SCREW (ELV) ASSY, FEED	
204	1-658-880-11	EHS FLEXIBLE BOARD	
205	3-020-351-01	SLEEVE (ELV2)	
206	3-930-334-01	SPRING (ELV), COMPRESSION	
207	3-930-345-01	PLATE (B), ELV LIMITER	
* 208	X-3371-215-1	CHASSIS (OP) ASSY	
209	3-930-344-01	PLATE (A), ELV LIMITER	
210	3-930-711-01	SPRING (ELV2), COMPRESSION	
211	3-930-339-01	WHEEL (SL), WORM	
212	3-338-645-31	WASHER (0.8-2.5)	
213	3-930-343-01	SCREW (K1.7X3.5)	
214	3-930-342-01	RETAINER (SP)	
215	3-930-336-01	HOLDER (SLB)	
216	3-930-335-01	DETENT, SL	
217	X-3371-213-1	HOLDER (SLA) ASSY	
218	X-3371-214-1	SCREW (SL) ASSY, FEED	

Ref. No.	Part No.	Description	Remark
219	3-930-331-01	GUIDE (OPA)	
220	3-020-346-01	SPRING (SL OUT 2), FEED	
⚠ 221	X-3379-728-1	PICK-UP, OPTICAL KMS-241C/J1N	
222	A-3283-295-A	SERVO BOARD, COMPLETE	
223	3-932-755-01	SCREW (M1.7X2.2)	
224	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
225	3-930-333-01	SLEEVE (ELV)	
M901	A-3291-507-A	MOTOR BLOCK ASSY, SP (SPINDLE)	
M902	A-3291-508-A	MOTOR BLOCK ASSY, SL (SLED)	
RV901	1-223-817-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)	
S901	1-570-771-21	SWITCH (HOME POSITION DET)	
#2	7-627-852-37	SCREW, PRECISION +P 1.7X1.8 TYPE3	
#4	7-627-855-07	SCREW, PRECISION +P 2X5.5 TYPE3	
#5	7-627-852-27	SCREW, PRECISION +P 1.7X3	
#6	7-627-552-18	SCREW, PRECISION +P 1.7X1.6	
#7	7-627-852-58	SCREW, PRECISION +P 1.7X5 TYPE3	

SECTION 6
ELECTRICAL PARTS LIST

LAMP | MAIN

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  CND: Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-672-198-12	LAMP BOARD			
		**********			
		< CAPACITOR >			
C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
* CN620	1-580-056-21	PIN, CONNECTOR (SMD) 3P			
		< PILOT LAMP >			
PL620	1-517-630-41	LAMP, PILOT (ILLUMINATION)			
		< RESISTOR >			
R620	1-216-298-00	METAL CHIP	2.2	5%	1/10W
		< SWITCH >			
S620	1-692-532-21	SWITCH, PUSH (1 KEY) (FRONT DOOR OPEN DET)			
**********					
	A-3283-298-A	MAIN BOARD, COMPLETE			
		**********			
	3-034-614-02	PAPER, SHIELD			
		< CAPACITOR >			
C500	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C502	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C503	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C504	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C505	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C507	1-110-450-11	ELECT CHIP	100uF	20%	6.3V
C509	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C510	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C520	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C530	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C540	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C541	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C550	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C600	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C601	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C602	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C603	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C604	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C605	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C606	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C607	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C608	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C609	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C610	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C611	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C650	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C651	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C652	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C653	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C654	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C699	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C700	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C701	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C800	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C801	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
		< CONNECTOR >			
CN500	1-573-370-21	CONNECTOR, FFC/FPC 30P			
* CN600	1-573-939-11	CONNECTOR, FFC/FPC (ZIF) 30P			
CN601	1-573-916-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN602	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CN603	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CN604	1-580-056-21	PIN, CONNECTOR (SMD) 3P			
CN700	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CN701	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
		< DIODE >			
D500	8-719-988-61	DIODE 1SS355TE-17			
D501	8-719-988-61	DIODE 1SS355TE-17			
D600	8-719-977-03	DIODE DTZ5.6B			
D601	8-719-977-03	DIODE DTZ5.6B			
D602	8-719-977-03	DIODE DTZ5.6B			
D800	8-719-421-18	DIODE MA8033-L-TX			
D801	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC500	8-759-571-84	IC PCM1718E/2K			
IC600	6-801-399-01	IC uPD784216AGC-151-8EU			
IC601	8-759-503-60	IC S-80740AN-D4-S			
IC602	8-759-238-47	IC TC74HCT7007AF(EL)			
IC603	8-759-238-47	IC TC74HCT7007AF(EL)			

MAIN POWER

Ref. No.	Part No.	Description			Remark
IC700	8-759-823-87	IC LB1638M			
IC701	8-759-823-87	IC LB1638M			
		< RESISTOR >			
JC501	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< COIL >			
L600	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q500	8-729-424-12	TRANSISTOR	UN2112		
Q600	8-729-904-60	TRANSISTOR	DTB113ZK		
Q601	8-729-421-22	TRANSISTOR	UN2211		
Q602	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q800	8-729-106-60	TRANSISTOR	2SB1115A		
Q801	8-729-200-13	TRANSISTOR	2SC2712-Y		
		< RESISTOR >			
R500	1-216-841-11	METAL CHIP	47K	5%	1/16W
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-801-11	METAL CHIP	22	5%	1/16W
R505	1-216-801-11	METAL CHIP	22	5%	1/16W
R509	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R540	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R541	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R542	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R600	1-216-821-11	METAL CHIP	1K	5%	1/16W
R601	1-216-833-11	METAL CHIP	10K	5%	1/16W
R602	1-216-841-11	METAL CHIP	47K	5%	1/16W
R603	1-216-821-11	METAL CHIP	1K	5%	1/16W
R604	1-216-821-11	METAL CHIP	1K	5%	1/16W
R605	1-216-821-11	METAL CHIP	1K	5%	1/16W
R606	1-216-837-11	METAL CHIP	22K	5%	1/16W
R608	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R609	1-216-821-11	METAL CHIP	1K	5%	1/16W
R610	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R611	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R612	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R613	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R614	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R615	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R616	1-216-821-11	METAL CHIP	1K	5%	1/16W
R617	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R618	1-216-845-11	METAL CHIP	100K	5%	1/16W
R621	1-216-821-11	METAL CHIP	1K	5%	1/16W
R622	1-216-851-11	METAL CHIP	330K	5%	1/16W
R623	1-216-821-11	METAL CHIP	1K	5%	1/16W
R624	1-216-851-11	METAL CHIP	330K	5%	1/16W
R800	1-216-815-11	METAL CHIP	330	5%	1/16W
R801	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R802	1-216-815-11	METAL CHIP	330	5%	1/16W

Ref. No.	Part No.	Description			Remark
		< NETWORK RESISTOR >			
RB601	1-233-412-11	RES, CHIP NETWORK 1.0KX4 (3216)			
RB602	1-233-810-21	RES, CHIP NETWORK 100KX4 (3216)			
RB603	1-233-412-11	RES, CHIP NETWORK 1.0KX4 (3216)			
RB605	1-233-412-11	RES, CHIP NETWORK 1.0KX4 (3216)			
RB606	1-233-810-21	RES, CHIP NETWORK 100KX4 (3216)			
RB607	1-233-412-11	RES, CHIP NETWORK 1.0KX4 (3216)			
RB608	1-239-446-11	RES, CHIP NETWORK 330KX4			
RB609	1-233-412-11	RES, CHIP NETWORK 1.0KX4 (3216)			
		< SWITCH >			
S600	1-571-914-21	SWITCH, KEYBOARD (STOP)			
		< THERMISTOR >			
TH600	1-804-497-21	THERMISTOR, CHIP			
		< VIBRATOR >			
X600	1-760-607-11	VIBRATOR, CERAMIC (14MHz)			
X601	1-579-886-21	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	A-3294-938-A	POWER BOARD, COMPLETE			
		**********			
*	3-031-503-01	BRACKET			
		< CAPACITOR >			
C900	1-126-204-11	ELECT CHIP	47uF	20%	16V
C901	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C902	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C903	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C905	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C906	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C910	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C911	1-164-162-11	CERAMIC CHIP	100PF	2%	50V
C912	1-126-193-11	ELECT	1uF	20%	50V
C913	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C920	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C921	1-164-162-11	CERAMIC CHIP	100PF	2%	50V
C922	1-126-193-11	ELECT	1uF	20%	50V
C923	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C930	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C933	1-126-204-11	ELECT CHIP	47uF	20%	16V
C934	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C936	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C938	1-128-590-11	ELECT CHIP	100uF	20%	6.3V
C940	1-164-346-11	CERAMIC CHIP	1uF		16V
C950	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C951	1-125-710-11	DOUBLE LAYERS	0.1F		5.5V
C952	1-124-779-00	ELECT CHIP	10uF	20%	16V
C970	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C971	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V

Ref. No.	Part No.	Description			Remark
C973	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C974	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C975	1-126-204-11	ELECT CHIP	47uF	20%	16V
C976	1-128-590-11	ELECT CHIP	100uF	20%	6.3V
C977	1-128-590-11	ELECT CHIP	100uF	20%	6.3V
C978	1-128-590-11	ELECT CHIP	100uF	20%	6.3V
C980	1-128-590-11	ELECT CHIP	100uF	20%	6.3V
C981	1-127-485-00	ELECT	33uF	20%	6.3V
C983	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C984	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN900	1-580-907-12	PLUG, CONNECTOR 9P (BUS CONTROL OUT)			
* CN901	1-573-939-11	CONNECTOR, FFC/FPC (ZIF) 30P			
		< JACK >			
CN902	1-580-441-11	JACK, PIN 2P (AUDIO OUT)			
		< DIODE >			
D900	8-719-421-27	DIODE MA728			
D901	8-719-057-80	DIODE MA8180-M-TX			
D902	8-719-421-27	DIODE MA728			
D903	8-719-057-80	DIODE MA8180-M-TX			
D904	8-719-421-27	DIODE MA728			
D905	8-719-057-80	DIODE MA8180-M-TX			
D930	8-719-422-97	DIODE MA8091-M			
D940	8-719-977-03	DIODE DTZ5.6B			
D941	8-719-988-61	DIODE 1SS355TE-17			
D950	8-719-988-61	DIODE 1SS355TE-17			
D951	8-719-422-62	DIODE MA8062-L-TX			
D952	8-719-041-79	DIODE MA721WA-TX			
D970	8-719-210-43	DIODE EC10QS-06			
		< FERRITE BEAD >			
FB903	1-414-235-22	INDUCTOR, FERRITE BEAD			
		< IC >			
IC900	8-759-444-86	IC BA8272F-E2			
IC930	8-759-385-17	IC NJM4580E(TE2)			
IC970	8-759-983-96	IC TL5001CPS			
		< COIL >			
L970	1-409-640-21	COIL, CHIP CHOKE 10uH			
L971	1-403-584-11	COIL, CHIP CHOKE 33uH			
L972	1-409-640-21	COIL, CHIP CHOKE 10uH			
		< FILTER >			
NF900	1-239-466-21	FILTER, EMI			
		< FUSE >			
PC1	1-533-351-11	FUSE, CHIP (2A/125V)			

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q910	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q920	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q930	8-729-424-59	TRANSISTOR UN2212			
Q931	8-729-920-85	TRANSISTOR 2SD1664-QR			
Q932	8-729-424-12	TRANSISTOR UN2112			
Q940	8-729-200-13	TRANSISTOR 2SC2712-Y			
Q941	8-729-027-38	TRANSISTOR DTA144EK-T146			
Q950	8-729-920-85	TRANSISTOR 2SD1664-QR			
Q970	8-729-106-60	TRANSISTOR 2SB1115A			
Q972	8-729-822-84	TRANSISTOR 2SB1202FAST			
		< RESISTOR >			
R900	1-216-089-11	RES-CHIP	47K	5%	1/10W
R910	1-216-079-00	METAL CHIP	18K	5%	1/10W
R911	1-216-097-11	RES-CHIP	100K	5%	1/10W
R912	1-216-081-00	METAL CHIP	22K	5%	1/10W
R913	1-216-081-00	METAL CHIP	22K	5%	1/10W
R914	1-216-033-00	METAL CHIP	220	5%	1/10W
R915	1-216-097-11	RES-CHIP	100K	5%	1/10W
R920	1-216-079-00	METAL CHIP	18K	5%	1/10W
R921	1-216-097-11	RES-CHIP	100K	5%	1/10W
R922	1-216-081-00	METAL CHIP	22K	5%	1/10W
R923	1-216-081-00	METAL CHIP	22K	5%	1/10W
R924	1-216-033-00	METAL CHIP	220	5%	1/10W
R925	1-216-097-11	RES-CHIP	100K	5%	1/10W
R930	1-216-049-11	RES-CHIP	1K	5%	1/10W
R931	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R932	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R933	1-216-009-11	RES-CHIP	22	5%	1/10W
R940	1-216-097-11	RES-CHIP	100K	5%	1/10W
R941	1-216-093-11	RES-CHIP	68K	5%	1/10W
R942	1-216-109-00	METAL CHIP	330K	5%	1/10W
R950	1-216-049-11	RES-CHIP	1K	5%	1/10W
R951	1-216-085-11	RES-CHIP	33K	5%	1/10W
R970	1-216-214-00	RES-CHIP	4.7K	5%	1/8W
R971	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R972	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R973	1-216-061-11	RES-CHIP	3.3K	5%	1/10W
R974	1-216-081-00	METAL CHIP	22K	5%	1/10W
R975	1-216-077-11	RES-CHIP	15K	5%	1/10W
R976	1-216-174-00	RES-CHIP	100	5%	1/8W
R977	1-216-198-00	RES-CHIP	1K	5%	1/8W
R978	1-216-198-00	RES-CHIP	1K	5%	1/8W
R979	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R980	1-216-649-11	METAL CHIP	820	0.5%	1/10W

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A-3340-373-A SENSOR BOARD, COMPLETE (When replacing any parts in the SENSOR board, the whole mounted board should be replaced.)

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SERVO

Ref. No.	Part No.	Description			Remark
	A-3283-295-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C100	1-107-685-11	TANTAL. CHIP	15uF	20%	6.3V
C101	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C102	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C103	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C104	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C105	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C106	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C107	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C108	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C109	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C110	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C111	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C112	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C200	1-107-685-11	TANTAL. CHIP	15uF	20%	6.3V
C204	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C207	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C208	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C210	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C211	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C212	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C213	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C214	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C215	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C216	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C217	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C218	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C220	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C300	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-113-984-11	TANTAL. CHIP	1.5uF	20%	35V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C306	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C320	1-113-984-11	TANTAL. CHIP	1.5uF	20%	35V
C400	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C401	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C502	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN100	1-573-929-21	CONNECTOR, FFC/FPC (ZIF) 20P			
CN200	1-573-370-21	CONNECTOR, FFC/FPC 30P			
* CN300	1-770-619-11	PIN, CONNECTOR 2P			
CN400	1-573-346-21	CONNECTOR, FFC/FPC 6P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D300	8-719-988-61	DIODE 1SS355TE-17			
		< FERRITE BEAD >			
FB200	1-414-594-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC100	8-752-080-95	IC CXA2523AR			
IC200	8-752-404-64	IC CXD2662R			
IC201	8-759-671-27	IC MSM51V4400E-70TS-K			
IC203	8-759-096-87	IC TC7WU04FU(TE12R)			
IC300	8-759-682-72	IC SC111236VMEL			
		< COIL >			
L100	1-412-058-11	INDUCTOR CHIP 10uH			
L200	1-412-058-11	INDUCTOR CHIP 10uH			
L300	1-412-034-11	INDUCTOR CHIP 330uH			
		< TRANSISTOR >			
Q100	8-729-216-22	TRANSISTOR 2SA1162-G			
Q200	8-729-200-13	TRANSISTOR 2SC2712-Y			
		< RESISTOR >			
R100	1-216-853-11	METAL CHIP	470K	5%	1/16W
R101	1-218-709-11	METAL CHIP	5.1K	0.5%	1/16W
R102	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R103	1-216-811-11	METAL CHIP	150	5%	1/16W
R104	1-216-853-11	METAL CHIP	470K	5%	1/16W
R105	1-218-739-11	RES-CHIP	91K	5%	1/10W
R106	1-216-994-11	RES-CHIP	13K	5%	1/10W
R107	1-216-994-11	RES-CHIP	13K	5%	1/10W
R108	1-216-994-11	RES-CHIP	13K	5%	1/10W
R109	1-216-842-11	METAL CHIP	56K	5%	1/16W
R110	1-216-833-11	METAL CHIP	10K	5%	1/16W
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W
R204	1-216-809-11	METAL CHIP	100	5%	1/16W
R205	1-216-833-11	METAL CHIP	10K	5%	1/16W
R206	1-216-845-11	METAL CHIP	100K	5%	1/16W
R207	1-216-855-11	METAL CHIP	680K	5%	1/16W
R208	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R209	1-216-821-11	METAL CHIP	1K	5%	1/16W
R210	1-216-821-11	METAL CHIP	1K	5%	1/16W
R211	1-216-811-11	METAL CHIP	150	5%	1/16W
R212	1-216-819-11	METAL CHIP	680	5%	1/16W
R213	1-216-853-11	METAL CHIP	470K	5%	1/16W
R214	1-216-809-11	METAL CHIP	100	5%	1/16W
R215	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R216	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R217	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R218	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description	Remark
		< NETWORK RESISTOR >	
RB200	1-233-576-11	RES, CHIP NETWORK 100X4	
RB300	1-233-600-11	RES, CHIP NETWORK 2.2X4 (3216)	
RB301	1-233-600-11	RES, CHIP NETWORK 2.2X4 (3216)	
		< SWITCH >	
S400	1-692-532-21	SWITCH, PUSH (1 KEY) (LIMIT)	
		< VIBRATOR >	
X200	1-795-144-21	VIBRATOR, CERAMIC (45MHz)	
**********			
		MISCELLANEOUS	
		**********	
53	1-776-474-11	CABLE, FLAT 7P	
61	1-668-438-11	MAIN FLEXIBLE BOARD	
106	1-668-264-11	SERVO FLEXIBLE BOARD	
204	1-658-880-11	EHS FLEXIBLE BOARD	
⚠221	X-3379-728-1	PICK-UP, OPTICAL KMS-241C/J1N	
M901	A-3291-507-A	MOTOR BLOCK ASSY, SP (SPINDLE)	
M902	A-3291-508-A	MOTOR BLOCK ASSY, SL (SLED)	
M903	X-3371-508-2	MOTOR ASSY, LD (LOADING)	
M904	X-3374-812-1	MOTOR ASSY, ELV (ELEVATOR)	
RV901	1-223-817-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)	
S901	1-570-771-21	SWITCH (HOME POSITION DET)	
S902	1-570-771-11	SWITCH (LOADING END SENSOR DET)	
S903	1-570-771-21	SWITCH (STORE END SENSOR DET)	
**********			
		ACCESSORIES	
		**********	
	3-240-563-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH) (US,CND)	
	3-240-563-21	MANUAL, INSTRUCTION (ENGLISH,FRENCH, GERMAN,DUTCH,ITALIAN) (AEP,UK)	
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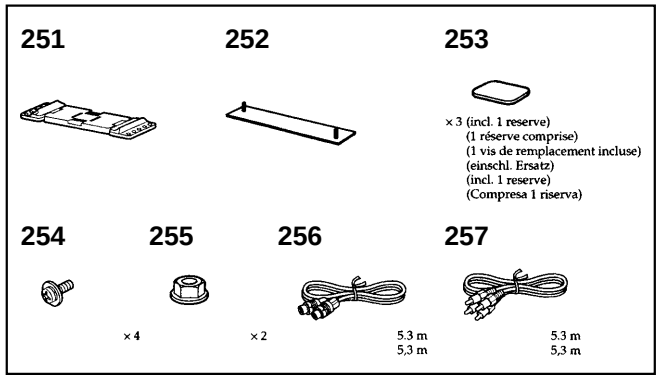
Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
251	3-930-163-21	BASE (FITTING)	
252	X-3371-178-1	BRACKET ASSY	
253	3-930-166-01	CUSHION (FITTING)	
254	7-682-961-01	SCREW +PSW 4X8	
255	4-304-511-00	NUT (M5), FLANGE	
256	1-590-519-21	CORD (WITH CONNECTOR) (BUS CABLE) (5.5m)	
257	1-590-874-11	CORD, CONNECTION (RCA PIN CORD) (5.5m)	



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002. 02	New
1.1	2002. 04	Class 1 laser product label addition (ENG-02001)